Your (Half Yearly Compliance Report) has been Submitted with following details	
Proposal No	SIA/OR/MIN/55807/2020
Compliance ID	482389178
Compliance Number(For Tracking)	EC/M/COMPLIANCE/482389178/2025
Reporting Year	2025
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	25-11-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	ODISHA
RO/SRO Office Address	Integrated Regional Offices, Bhubaneswar
Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, ODISHA with Notification to Project Proponent.	

Deputy Director General of Forests (C),
Ministry of Env., Forest and Climate Change,
Integrated Regional Office,
A/3, Chandrasekharpur,
Bhubaneswar – 751023
Email: roez.bsr-mef@nic.in

MD/ENV/ 398 / 109 /2025
Date: 14.11.2025

Ref: Environmental Clearance File No.55807/89-MINB1/06-2022, dated: 18.10.2022.

Sub: Half-yearly compliance status report of Environmental Clearance conditions for the period April 2025 – September 2025 in respect of Kalamang West (Northern Part) Iron Ore Mines, M/s Tata Steel Limited.

Dear Sir,

Kindly find attached herewith the half-yearly compliance status report in respect of the stipulated Environmental Clearance conditions of Kalamang West (Northern Part) Iron Ore Mine, M/s Tata Steel Limited for the period from April **2025 – September 2025.**

We trust that the measures taken towards environmental safeguards comply with the stipulated environmental conditions. We look forward to your further guidance which shall certainly help us in our endeavor for further improve upon our Environmental Management practices.

Thanking you,

Yours faithfully,
f: Tata Steel Limited

Area Manager (Environment), OMQ

Encl.: As above

Copy to

- The Chairman, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107 (W. B.)
- The Member Secretary, State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar – 751012 (Odisha)
- The Regional Officer, SPCB, Near Panposh Hockey Chowk, Rourkela, Dist – Sundargarh

HALF-YEARLY EC COMPLIANCE REPORT FOR

KALAMANG WEST (NORTHERN PART) IRON ORE MINE OF TATA STEEL LIMITED

ENVIRONMENTAL CLEARANCE NO. 55807/89-MINB1/06-2022 DATED 18.10.2022

(Period of Compliance: April 2025 to September 2025)

Sr. No.	Condition	Compliance status
A.	**Specific conditions:**	
(i)	The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of EIA report.	Agreed. Necessary arrangements being carried out. It will be complied once the mine is operational.
(ii)	The public road passing through the mining lease shall be given access to the public after lease execution in consultation with the villagers.	The public road passing inside the mine lease area will be diverted along southern mine lease boundary and will be accessible to the villagers. The diversion of the road has been permitted by the Executive Engineer, Rural Works division, Sundargarh. Further Executive Engineer, Rural Works division, Sundargarh has requested Chief Engineer, PMGSY to issue a letter to Collector and District Magistrate to take up the road under DMF. The copy of the letter is attached herewith as **Annexure-1.** Till the time diversion of public road is completed, villages will be given access to use existing road.
(iii)	As submitted by project proponent vide letter no.GM/OMQ/70/11-G/FY‟23 dated 17.10.2022, an amount of Rs.140 Lakhs shall be spent towards implementation for surface water run-off management, installation of STP and ETP in three years time period.	In progress of compliance. Surface Runoff Management study has been conducted and the recommendations of the same will be implemented when the mine is in operation. Installation of STP and ETP will be done within stipulated timeframe after starting of mining operation.
B.	**Standard Conditions:**	
I.	**Statutory compliance:**	
(i)	This Environmental Clearance (EC) is subject to orders/ judgment of Hon‟ble Supreme Court of India, Hon‟ble High Court, Hon‟ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.	Agreed. We agree to abide to all the orders/ judgment of Hon‟ble Supreme Court of India, Hon‟ble High Court, Hon‟ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

(ii)	The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India and Ors before commencing the mining operations.	Agreed. This is a new lease and hence there is no illegal mining involved. We agree to comply with obtaining statutory requirements before commencing of mining operations.
(iii)	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining and Geology in strict compliance of Judgment of Hon"ble Supreme Court dated 2nd August, 2017 in Write Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India and Ors.	Not Applicable. It is a virgin iron ore block obtained through auction process. No prior compensation levied.
(iv)	This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEFandCC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,	Not applicable. The map duly approved by the Divisional Forest Officer (DFO), Keonjhar, depicting the distances of various National Parks, Wildlife Sanctuaries, and Elephant Reserves from the Kalamang mine is attached as **Annexure-2**.
(v)	This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.	Agreed. The project has been granted Stage-II approval under Sec 2(ii) of FC Act,1980 vide F.No. 8-13/2022-FC, dated 30.07.2025 for forest land over 42.608 Ha. Forest Stage-II clearance is attached herewith as **Annexure-3.**
(vi)	Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.	Agreed CTE for the project has been obtained by the State pollution control board of Odisha via letter No. 20953/IND-II-CTE-6743 dated 11.11.2022. The project has obtained CTO from State Pollution Control Board, Odisha vide File No. 15947/IND-I-CON-7002; dated 25.08.2025. The CTO letter is attached as **Annexure-4.**
(vii)	The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development and Regulation), Act, 2015 and rules and regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.	Agreed All the relevant provisions of the Mines Act, 1952, Mines and Mineral (Development and Regulation), Act, 2015 and rules and regulations made there under shall be adhered to. The various circulars issued by DGMS and IBM from time to time will be strictly adhered to as directed.
(viii)	The Project Proponent shall obtain consents from all the concerned landowners, before start of mining operations, as per the provisions of	Agreed. Consents from all the concerned landowners, before start of mining

	MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.	operations will be obtained as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned.
(ix)	The Project Proponent shall follow the mitigation measures provided in MoEFandCC's Office **Memorandum No. Z-l1013/57/2014-IA.II (M), dated 29th October, 2014**, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".	Agreed. Provisions made in the Office Memorandum will be taken into consideration and proper mitigative measures will be taken to address impact of mining on Habitations and villages.
(x)	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of groundwater for the project.	Complied. CGWA renewal NOC has been granted vide letter no. CGWA/NOC/MIN/REN/1/2024/10145 dated 12.11.2024 valid till 31.08.2026. NOC Copy attached herewith as **Annexure-5.**
(xi)	A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.	Complied A copy of EC letter has been marked to Guali Gram panchayat and Malda Gram panchayat. Copy of the submitted letter attached herewith as **Annexure-6.**
(xii)	State Pollution Control Board shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector"s office/ Tahasildar"s Office for 30 days.	Complied. The same has been displayed by State Pollution Control Board at Regional office, District Industries Centre and Collector"s office/ Tahasildar"s Office for 30 days.
(xiii)	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change (www.environmentclearance.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFandCC Regional Office for compliance and record.	**Complied.** Advt. done in Sunday Pioneer dated 23.10.2022 and in Pragatibadi Odiya Newspaper on Sunday dated 23.10.2022. The copy of the advertisement is forwarded to the MoEFCC Regional Office at Bhubaneswar for compliance and record. Copy of the advertisement attached herewith as **Annexure-7.**
(xiv)	The Project Proponent shall inform the MoEFandCC/SEIAA, Odisha for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.	Agreed. In case there will be any change in the ownership of Mining lease, MoEFandCC/SEIAA will be informed in prior and the same will be carried as per the provisions of EIA Notification,2006.
(I)	**Air quality monitoring and preservation**	

(i)	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2; CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCl/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.	It will be complied once the mine is operational. Installation of CAAQMS and digital display of the data shall be done in consultation with regional office of OSPCB. Manual monitoring of ambient air quality is being carried out buffer zone. Ambient Air Monitoring report is attached herewith as **Annexure-8.**
(ii)	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from ah sources shall be regularly controlled by installation of required equipment/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFandCC/ Central Pollution Control Board.	Effective safeguard measures for dust generation and subsequent suppression will be taken during mining operation. Fugitive emission from sources will be mitigated by installation of pollution control equipment and necessary dust suppression arrangements shall be made to ensure air pollution level conform to the standards prescribed by the MoEFandCC/ Central Pollution Control Board.
(II)	**Water quality monitoring and preservation**	
(i)	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFandCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.	Agreed During current mining scheme period there is no intersection of ground water (GW) table. In case there is an intersection of GW level permission/NOC shall be taken from CGWA and MoEFandCC based on detailed hydro-geological study of the area.
(ii)	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and	Being Complied.

	records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.	Monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease is being monitored Quarterly. All efforts will be taken to ensure to nurture ground water table post start of mining operation. Water level is being monitored through series of dug well on monthly basis. The trend changes in Ground water level is submitted to CGWB on quarterly basis. Communication to Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board regarding water level and quality along with flow rate measurement is attached as **Annexure-9.**
(iii)	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.	Being Complied. Ground water quality and ground water level is monitored in open well in surrounding villages. The network of open dug wells is being established for monitoring the GW level. Water level is being monitored through series of dug well on monthly basis. The trend changes in Ground water level is submitted to CGWB on quarterly basis. Communication to Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board regarding water level and quality along with flow rate measurement is attached as **Annexure-9.**
(iv)	The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFandCC / SEIAA, Odisha. The monitoring of water courses/	Regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease is being carried out by a NABL accredited lab. Surface water quality monitoring report analysis attached herewith as **Annexure-10.** Other provisions of gullies at appropriate places will be made after the start of mine operation. There is no water courses/ bodies existing in lease area.

	bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.	
(v)	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1 /2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.	Agreed. It will be complied after the commencement of the mining activities.
(vi)	The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rainwater passes in rainy season. Finally, the excess supernanted after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.	Agreed. Retaining wall and settling pond along with check dams will be constructed as per the approved mine plan after commencement of the mining activities. Aside to this a scientific study has been conducted for surface runoff management of the mine lease hold area and the recommendations of the study will be implemented.
(vii)	De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of desilting.	De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit with respect to this is attached herewith is attached as **Annexure-11.**
(viii)	Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of	Design of the retaining wall from a chartered civil engineer is enclosed herewith as **Annexure-12.**

	Environmental Clearance to ensure that no silt after wash up is escaped from the core/buffer zone of the mines.	
(ix)	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office, MoEF and CC annually.	Agreed. Rainwater harvesting measures as per the hydrogeological study will be implemented at the mine site.
(x)	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.	It will be complied. An ETP will be established to treat the industrial wastewater after treating it through oil and grease trap. The inlet and outlet properties of effluent will be monitored as per the standards issued by SPCB.
(xi)	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF and CC and State Pollution Control Board.	It will be complied after the commencement of the mining activities. Initiatives like rain water harvesting and reuse of water from ETP, STP will be done in order to reduce the consumption of fresh water and the same will be reported to MoEF7CC and SPCB.
(III)	**Noise and vibration monitoring and prevention**	
(i)	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	It will be complied. The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer will be measured as per DGMS guidelines after the mine becomes operational.
(ii)	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.	Agreed. All precautionary actions will be taken not to disturb the habitations or the animal population around.
(iii)	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with	It will be complied. All the workers will be provided with earmuffs and ear plugs and other PPE w.r.t to the location and type of work. Adequate training and awareness will be provided for health and safety.

	protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.	Monitoring Report for Noise level in buffer zone is attached herewith as **Annexure-13.**
(IV)	**Mining Plan**	
(i)	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. No change in basic mining proposal like mining technology, total excavation, mineral and waste production, lease area and scope of working (viz. method of mining, overburden and dump management, O.B and dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.	Agreed. We will adhere to the working parameters of mining plan which was submitted at the time of EC appraisal and mining plan.
(ii)	The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining and Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.	Final Mine Closure Plan along with financial assurance shall be prepared before final closure of mine as per the relevant provisions of MMDR-1957. The approved final mine closure plan will be submitted to concerned regional office of MoEFandCC within 2 months of its approval.
(iii)	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFandCC and its concerned Regional Office / SEIAA, Odisha.	Agreed. Excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation will be carried out as per the approved mine plan and the compliance status will be submitted half-yearly to the MoEF CC and its concerned Regional Office / SEIAA, Odisha.
(V)	**Land reclamation**	
(i)	The Overburden (O.B.) generated during the mining operations shall be stacked at	Agreed.

	earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.	Mining operation is yet to start. The overburden and topsoil generated shall be stacked and governed as per the approved mine plan.
(ii)	The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.	Agreed. It will be complied as per approved mining plan and DGMS guidelines.
(iii)	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.	Agreed. It will be done as per Approved Mining Plan cum Progressive Mine Closure Plan.
(iv)	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.	Agreed. Adequate measures to prevent soil erosion like grass plantation/ coir matting on dump slopes will be practiced. Further plantation with native species will be done on all dump slopes. Dumps will be protected by retaining walls.
(v)	The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEFandCC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.	Agreed. The slope stability study has been carried out CIMFR-Dhanbad. The ultimate height of the dump is 43m. The final report of the same is attached as herewith as **Annexure-14.**
(vi)	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be	It will be complied. A detailed surface runoff management study is being carried out for the same and same shall be implemented with the start of mining operation.

	de-silted regularly, particularly after monsoon season, and maintained properly.	
(vii)	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the comers of the garland drains.	It will be complied. Mining is yet to start. Check dams of appropriate size, gradient and length will be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies.
(viii)	The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.	Agreed. Topsoil will be stored at earmarked site and its physical parameters will be maintained as per DGMS guidelines. The topsoil will be used for land reclamation and plantation purpose only.
(ix)	The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	Agreed. Re-grassing of the mining area and planation will be carried out according to the mine closure plan.
(VI)	**Transportation**	
(i)	No Transportation of the minerals shall be allowed in case of roads passing through transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all	Mining operation is yet to start. It will be complied. Proper traffic study of the mineral transportation has been carried out and the recommendations of the same will be implemented with start of mining operations. Pollution Under Control (PUC) certificate for all the vehicles from will be maintained and water sprinkling will also be done regularly to arrest the dust load.

	the vehicles from authorized pollution testing centers.	
(ii)	The Main haulage road within the mine lease should be provided with a permanent water arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipment like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.	It will be complied. The provision for permanent and mobile water sprinkling arrangement will be made in areas of dust generation. Pollution control equipment like dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. Closed belt conveyors will be installed in the crushing and Screening plant to arrest fugitive dust emission.
(iii)	Traffic management shall be done as per recommendation of Traffic Management Study Report.	It will be complied. Recommendations of the traffic study will be implemented.
(iv)	The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.	Agreed. Proper parking plaza will be made as per the recommendation of NEERI.
(VII)	**Green Belt**	
(i)	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.	Agreed. 7.5 m wide safety zone will be developed all along the mine lease boundary as per CPCB guidelines in order to arrest pollution emanating from mining operations within the lease.
(ii)	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.	Agreed. The CPCB guidelines will be adhered to carryout plantation. Plantation will be carried out in mining lease, around water body, along the roadsides, in community areas etc.

(iii)	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.	It will be complied. Arrangements for livestock feed will be developed in the nearby areas.
(iv)	The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wildlife Warden of the State Govt and implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.	The site-specific wildlife conservation plan for Kalamang (West) Northern Part Iron Ore Block has been approved by the PCCF(Wildlife)and Chief Wildlife warden, Odisha vide letter no.11356/CWLW-FDWC-FD-0170-2021, dated-30.10.2023. Implementation status (annual) will be submitted to the Regional Office of the Ministry.
(VIII)	**Public hearing and human health issues**	
(i)	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEFandCC Regional Office and DGMS on half-yearly basis.	Agreed. Regular as well as Periodical medical examination of the workers engaged in the mining activities will be carried as per the DGMS guidelines. It shall be complied once the mine is operational. Status report on the same will be submitted to MoEFandCC Regional Office and DGMS on half-yearly basis.
(ii)	A commitment in form of an undertaking for periodical occupational health check-up of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.	A commitment in form of an undertaking has been submitted for periodical occupational health check-up of the employee and the local people to be done through an occupational health expert as per the detailed action plan submitted and is attached herewith as **Annexure-15**.
(iii)	The Project Proponent must demonstrate commitment to work towards „Zero Harm" from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace	We are committed to work towards „Zero Harm" from our mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and

	hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighbourhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.	assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community once the mine is operational. Awareness programs are being conducted by PP.
(iv)	The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 xl4 inches and of good quality).	Agreed. It will be complied post commencement of mining operation.
(v)	The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should	It will be complied post commencement of mining operation. Records for performance indicators workers will be maintained and the same shall be submitted to Regional Office, MoEFandCC annually.

	not show any capacities,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFandCC annually along with details of the relief and compensation paid to workers having above indications.	
(vi)	The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	Agreed. Training and information on safety and health aspects will be given to concerned person working.
(vii)	Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.	Agreed. Provision for housing with necessary infrastructure like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. will be provided. STP will be installed for the treatment of wastewater.
(viii)	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.	The work is in progress and the status report will be submitted to Regional Office of the Ministry along with District Administration. Details of budget expended for fulfilling Public Hearing issues being submitted periodically as **Annexure-16.**
(ix)	Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEFandCC, Govt. of India.	The Mine operation has not started. Issues raised will be dealt as per the prescribed plan and within stipulated time frame.
(IX)	**Corporate Environment Responsibility (CER)**	
(i)	The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC	MoEFCC, vide its OM dated 30th September 2020, has stated that the CER (Corporate Environment Responsibility) cost for the project is based on Public

	should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude and longitude of infrastructure developed and road constructed needs to be submitted to Regional Office MoEFandCC annually along with audited statement.	Hearing outcome and as per the commitments made by the project proponent during the Public hearing. The action plan to comply with the Public hearing commitments was finalized and submitted as part of EIA report. Details of budget expended for fulfilling Public Hearing issues being submitted periodically as **Annexure-16.**
(ii)	Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEFandCC and its concerned Regional Office / SEIAA, Odisha.	It will be complied after start of mine operations and the data will be communicated to MoEFandCC and its concerned Regional Office / SEIAA, Odisha with six monthly compliance report.
(X)	**Miscellaneous**	
(i)	The Project Proponent shall prepare digital map (land use and land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEFandCC.	Complied. Land use and land cover of the entire lease area is attached herewith as **Annexure-17.**
(ii)	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Agreed. The same will be communicated.
(iii)	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEFandCC and its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.	It is being complied. Compliance report is submitted in every 6 months to MoEFandCC and its concerned Regional Office, SEIAA and SPCB. The half yearly compliance is submitted at companies' website. The link to access Half yearly compliance report is provided below. https://www.tatasteel.com/media/24444/ec-compliance_kalamang-west-northern-part-iron-ore-mine_oct24-to-mar25
(iv)	A separate „Environmental Management Cell" with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFandCC.	Complied. "Environment Management has been established. The organizational structure attached herewith as **Annexure-18.**
(v)	The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.	It will be complied as recommended.

(vi)	The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	It will be complied.
(vii)	The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.	Agreed. Infrastructure on drinking water, health care and education in nearby villages will be completed within stipulated time frame.
(viii)	The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.	Agreed. The permission from DGMS under 106(2b) to carry out blasting operation within the lease area has been obtained vide letter No. 33252135; dated 25.09.2025 attached as **Annexure- 19**.
(ix)	Fe grade - 55 and +45 to be attempted to use by blending with higher grade.	Agreed. It will be done after the starting of mine operations.
(x)	It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB and Regional Office of the Ministry of Environment and Forest, Odisha in hard and soft copies on 1st June and 1st December of each calendar year. The proponent shall also upload the compliance report including results of monitored data, as applicable in the website of the Ministry for monitoring of EC Conditions.	It is being complied. Compliance report being submitted in every 6 months to MoEFandCC and its concerned Regional Office, SEIAA and SPCB
(xi)	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the Odisha State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective to the MoEFandCC and its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.	Complied. The environmental statement for FY 25 has been submitted to Odisha State Pollution Control Board has been submitted vide letter No.MD/ENV/321/120/2025 dated 08.09.2025. Environmental statement is attached herewith as **Annexure-20.**
(xii)	The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional	We are submitting the six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on our website and shall update the same periodically.

	Office of MoEFandCC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	
(xiii)	The concerned Regional Office of the MoEFandCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFandCC officer(s) by furnishing the requisite data / information / monitoring reports.	Agreed. The same will be practiced.
(xiv)	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act,1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.	Agreed. Requisite CTO has been obtained for operation under Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981. Orders by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter will be complied.
(xv)	This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.	Agreed. Will comply orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable
(xvi)	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Not Applicable in our case.

Annexure-1

GOVERNMENT OF ODISHA

OFFICE OF THE EXECUTIVE ENGINEER
RURAL WORKS DIVISION, SUNDARGARH-II

By Fax/E-mail/Speed Post/Regd Post.
Tel No. 0661-2664691
E-Mail: rw_rourkela@yahoo.co.in

Letter No.2614 // Date 15.04.2025

To

The Chief Engineer (PMGSY)
Rural Works, Odisha, Bhubaneswar

Sub: Regarding Diversion of Existing Public Road Passing through Kalamang West (Northern Part) Iron Ore Block of M/s Tata Steel Limited for Public Safety, Eco-friendly and Sustainable Mining.

Ref: (1) Your good office letter No.37302 Dtd.26.11.2024.
(2) Letter No.KGP/KAL/03/FY'26 Dtd.10.04.2025 of Chief Kalamang&Gandhalpada Project, OMQ.

Sir,

In inviting a kind reference to the subject cited above, it is to state that the diversion proposal for the said road was approved and this office was asked to intimate regarding maintenance of road 'Bhanjpali to Kalamang' constructed vide package No.OR-30-ADB-129/IV from ch.0/0 to 10/26 Km to TATA Steel limited. Accordingly a meeting was conducted in between Thakur Ajay Kumar Vishwambharnath head Kalmang Tata Steel Ltd..Joda in presence of the Undersigned on 25.03.2025 in the office chamber of E.E, R.W. Division, Sundargarh-II to maintain the entire length of road. However TATA Steel Ltd. shown his unwillingness to maintain the entire length to this office vide his letter under reference – 2 as other Mines are using the same road to render their mining through the said road. Further this office will not also able to maintain the road out of our limited maintenance fund as heavy mining traffic are plying through this road.

Hence, in these circumstances, it may kindly be requested to issue a letter from Govt. Level to the Collector & District Magistrate, Managing Trusty DMF to take up the road under DMF

This is for favour of your kind information and necessary action.

Yours faithfully

15-4-25
Additional Chief Engineer
Rural Works Division, Sundargarh-II

Memo No.2615 Dtd.15.04.2025

Copy to Chief Kalamang&Gandhalpada Project, OMQ, TATA Steel Ltd., Mines Division, Joda, Keonjhar for information.

15-4-25
Additional Chief Engineer
Rural Works Division, Sundargarh-II

PLATE No. 1

THE MAP OF ODISHA SHOWING THE DISTANCE OF THE PROJECT AREA OF KALAMANG WEST (NORTHERN PART), BLOCK FOR IRON ORE MINE OF BHUSHAN STEEL LIMITED (NOW TATA STEEL BSL LIMITED) IN BONAI FOREST DIVISION UNDER SUNDARGARH DISTRICT & KEONJHAR FOREST DIVISION UNDER KEONJHAR DISTRICT,ODISHA. FROM THE NATIONAL PARKS / SANCTUARIES AND ELEPHANT / TIGER RESERVE AND THEIR CORRIDORS

Scale : 30 0 30 60 Kilometers

LEGEND
- Project Area
- Elephant Corridor
- Railways
- National Highways
- District Boundary
- Wildlife Sanctuaries/National Parks
- River/Water Body
- Mayurbhanj Elephant Reserve
- Sambalpur Elephant Reserve
- Mahanadi Elephant Reserve

List of Sanctuaries/National Parks/Tiger Reserves/Elephant Reserves in Odisha.

Sl. No.	Sanctuaries	Distance in Km.
1.	Bhitarkanika	203.36 Km.
2.	Similipal	82.02 Km.
3.	Satkosia Gorge	130.93 Km.
4.	Hadgarh	116.81 Km.
5.	Nandankanan	187.31 Km.
6.	Baisipalli	159.89 Km.
7.	Kotagarh	261.23 Km.
8.	Chandaka-Damapara	166.20 Km.
9.	Khalasuni	108.58 Km.
10.	Balukhand-Konark	229.05 Km.
11.	Kuldiha	130.54 Km.
12.	Debrigarh	164.65 Km.
13.	Lukhari Valley	280.23 Km.
14.	Chilika (Nalaban)	237.37 Km.
15.	Badrama	102.69 Km.
16.	Sunabeda	311.94 Km.
17.	Karlapat	311.46 Km.
18.	Kapilas	139.35 Km.
19.	Gahirmatha (Marine)	211.29 Km.
National Parks		
1.	Similipal	82.02 Km.
2.	Bhitarakanika	203.36 Km.
Tiger Reserve		
1.	Similipal	82.02 Km.
Elephant Reserve		
1.	Mayurbhanj Elephant Reserve	52.53 Km.
2.	Sambalpur Elephant Reserve	37.28 Km.
3.	Mahandi Elephant Reserve	111.77 Km.
Elephant Corridors		
①	Badampahad-Dhoba Dhobani	75.51 Km.
②	Badampahad Karida East	92.70 Km.
③	West Bengal Deuli-Suliapada	173.07 Km.
4a	Similipal-Hadagarh	113.10 Km.
4b	Hadagarh Kuldiha	128.41 Km.
⑤	Telkoi Pallahada	47.12 Km.
⑥	Karo-Karampada	8.6 Km.
⑦	Maulabhanja Jiridimal Anantapur	104.05 Km.
⑧	Kanheijena Anantapur	78.53 Km.
⑨	Buguda Central R.F	167.50 Km.
⑩	Nuagaon Baruni	143.18 Km.
⑪	Tala Kholagarh	134.57 Km.
⑫	Barpahada Tarava Kantamal	197.80 Km.
⑬	Kotagarh Chandrapur	264.19 Km.
⑭	Karlapata-Urlabani	260.98 Km.

Source: Wild Lifeof Odisha, Forest Department, Govt. of Odisha.

Source : Page No. 12, Remote Sensing Application for characterization of Elephant Habitats & Corriodors in Odisha & part of the Bihar by PCCF (Wildlife &CWLW,Bhubaneswar and ORSAC,Bhubaneswar

Source: Wild Life of Odisha, Forest Department Govt. of Odisha

Ranger Inspector Bhadrasahi

FOREST SECTION OFFICER GUALI

Forest Range Officer BARBIL

Jr. Mining Officer Office of J.D.M, Joda

Joint Director of Mines, Joda, Dist.-Keonjhar.

TAHASILDAR BARBIL

COUNTERSIGNED

Divisional Forest Officer Keonjhar Division

For Tata Steel BSE Ltd.

Manikanta Naik
Chief, Corporate Services

Annexure Type text

Government of India
Ministry of Environment, Forest and Climate Change
(Forest Conservation Division)
*****

Indira Paryavaran Bhawan,
Jor Bag Road, Aliganj
New Delhi - 110003.
Dated: 30-07-2025

To

The Addl. Chief Secretary (Forests),
Government of Odisha,
Bhubaneswar.

Sub: Proposal for seeking prior approval of the Central Government under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 42.608 ha of forest land (16.658 ha in Keonjhar Forest Division and 25.950 ha in Bonai Forest Division) within Kalmang West (Northern Part) Iron Ore Block in Keonjhar and Sundargarh District of Odisha, allotted to M/s Tata Steel BSL Limited (Formerly known as Bhusan Steel Ltd) (Online proposal no. FP/OR/MIN/49169/2020)

Madam/Sir,

I am directed to refer to the Government of Odisha's letter No. FE-DIV-FLD-0048-2022-10644 dated 17.06.2022, and additional information submitted vide No. 22410/ 9F (MG) –66/2021 dated 03.11.2022, vide letter No. 4255/9F (MG) –51/2021 dated 03.03.2023, vide letter No. 15271/ 9F (MG) –66/2021 dated 28.07.2023 and vide letter No. 9F (MG)- 12/2023 dated 21.11.2023 on the above subject seeking prior approval of the Central Government in accordance with Section-2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 . After careful examination of the proposal by the Forest Advisory Committee, constituted under Section-3 of the said Act, 'in-principle' approval to the proposal under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 was granted vide this Ministry's letter of even number dated 22.12.2023 subject to fulfillment of certain conditions prescribed therein. The State Government has furnished compliance report in respect of the conditions stipulated in the in-principle approval and has requested the Central Government to grant final approval.

In this connection, I am directed to say that on the basis of the compliance report furnished by the State Government vide letter No. no. 18578/ 9F (MG) –66/2021 dated 12.09.2024, letter no. 24851/ 9F (MG) –380/2019 dated 09.12.2024 and subsequent letter no. 25269/ 9F (MG) –66/2021 dated 13.12.2024, and letter dated 06.06.2025, 'final' approval of Central Government under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 is hereby granted for non-forestry use of 42.608 ha of forest land (16.658 ha in Keonjhar Forest Division and 25.950 ha in Bonai Forest Division) within Kalmang West (Northern Part) Block for Iron Ore Mines in Keonjhar and Sundargarh District of Odisha, allotted to M/s Tata Steel BSL Limited (Formerly known as Bhusan Steel Ltd), subject to fulfilment

of the following conditions:

1. Legal status of the diverted forest land shall remain unchanged;
2. The State Government shall ensure that Compensatory afforestation over the non-forest land equal in extent to the forest land being diverted which has also been notified as PF namely 'Jaldihi Protected Forest' under Section-33 of the Odisha Forest Act, 1972 vide notification No.FE-DIV-FLD-0048-2022 (10F (Cons)23/2022) 16879/FE&CC dated 03.09.2024 shall start within three years from the date of final approval and maintained thereafter in accordance with the approved Plan in consultation with the State Forest Department;
3. The State Government shall ensure that the additional compensatory afforestation for balanced seedling which can not be accommodated in the identified non-forest, shall be raised land over an area of 44.002 ha. of degraded Forest land namely Balabhadrapur RF at the project cost under the supervisions of the State Forest Department and afforestation will be done within three years from the date of final approval and maintained thereafter in accordance with the approved Plan in consultation with the State Forest Department;
4. The State Government shall ensure that the afforestation on degraded forest land to be selected elsewhere, measuring one and a half times the area under safety zone, shall also be done at the project cost under the supervisions of the State Forest Department and afforestation will be done within two years from the date of final approval and maintained thereafter in accordance with the approved Plan in consultation with the State Forest Department;
5. The compensatory afforestation, including the soil and moisture conservation activities, shall be undertaken by the State Forest Department in accordance with the CA scheme approved by the competent authority of the State from the funds deposited by the user agency for the purpose. Afforestation of afforestation of indigenous species should be undertaken and the afforestation will be maintained for 10 years;
6. The user agency either himself or through the State Forest Department shall implement gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease as per the approved scheme and funds already deposited by the UA in this regard;
7. The State Government has realized the NPV of the forest area diverted under this proposal from the User Agency, as per the orders dated 28.03.2008, 24.04.2008 and 09.05.2008 passed by the Hon'ble Supreme Court of India in Writ Petition (Civil) No. 202/1995 and the guidelines given under para 3 of the Chapter -3 of the Consolidate Guidelines and Clarifications issued under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and Van (Sanrakshan Evam Samvardhan) Rules, 2023 published by the Ministry on 29.12.2023, the user agency shall pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;
8. Compensatory levies, if any, realized in future under the extant project, shall be transferred/ deposited, through e-payment module on PARIVESH portal

(https://parivesh.nic.in/), into the account of CAMPA of the State concerned, managed by the National Authority (CAMPA);

9. *The State Govt. shall ensure that the transportation of ore shall be carried out as per the recommendation in the report submitted by CSIR-NEERI.*
10. *The State Govt. shall ensure that the user agency shall follow the recommendations of the CSIR- NEERI guidelines and the suggested ore transportation mode SOTM3. Further, the State Govt. shall also ensure the implementation of transportation of iron ore through proposed slurry pipeline from source of ore to their Steel Plant located at Kalinganagar.*
11. *The State Govt. shall ensure that the oversight committee constituted vide letter no. 8-96/1996-FGC (Pt.-I) dated 29.12.2023 shall submit the monitoring report of the compliance of the conditions stipulated in this final approval every year end of the December.*
12. T*he State Govt. shall ensure the implementation of already prepared* Integrated Regional Wildlife Conservation Plan for 10 years covering the forest Division of Sundargarh, Jharsuguda and Keonjhar Districts at the cost of UA. The works shall be executed as per APO and the regional plan shall have site/species specific wildlife sub plans/prescriptions;
13. ***The Biodiversity Conservation plan has been prepared by the IIFM Bhopal for entire landscape of Netrabandha Pahar. The State Govt. shall ensure that proportionate cost of implementation of the plan shall be deposited by the User Agency in CAMPA Account before handing over the forest land to the User Agency.***
14. *The State Govt. shall ensure that the conditions stipulated in EC shall be strictly implemented and monitored;*
15. *The State Govt. shall ensure that the Soil and moisture conservation measures shall be implemented in and around 10 KM radius of the mining lease areas at project cost;*
16. As per the recommendation of the NEERI report the State Government shall explore the possibility for transportation of iron ore through conveyor belt and take a reasoned decision;
17. Following activities, as per approved plan / schemes, shall be implement in the lease area by the user agency under the supervision of the State Forest Department:

    a. Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three years with effect from the issue of final approval in accordance with the approved Plan in consultation with the State Forest Department;

    b. Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme;

    c. Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the

approved scheme;

d. Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 28°;

16. **Safety Zone Management:** Following activities, at project cost, shall be implement by the user agency for the management of safety zone as per relevant guidelines issued by the Ministry's guidelines:

    a. User agency shall ensure demarcation of safety zone (7.5-meter strip all along the inner boundary of the mining lease area), and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers under the supervision of the. State Forest Department;
    b. Boundary of the safety zone of the mining lease, adjacent to habitation/roads, should be properly fenced by the user agency;
    c. Safety zone shall be maintained as green belt around mining lease and to ensure dense canopy in the area, regeneration shall be taken up in this area by the user agency at project cost under the supervision of the State Forest Department;
    d. The State Government and the user agency shall ensure that safety zone is maintained as per the prescribed norms;
17. No damage shall be caused to the top-soil and the user agency will follow the top soil management plan;
18. The User Agency shall regularly undertake de-silting of village tanks and other water bodies, located within five km from the mine lease boundary, as per plan submitted along with the compliance of 'in-principle' approval, so as to mitigate the impact of project on such tanks/water bodies.
19. The cost of felling of trees shall be deposited by the User Agency with the State Forest Department;
20. The User Agency shall undertake that afforestation of the non-mineralized virgin forest land within the mining area shall be taken up at project cost;
21. The user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department;
22. The provisions of the approved Site-Specific Wildlife Management Plan shall be implemented by the State Forest Department from the cost realized from the user agency on pro rata basis;
23. The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Forest (Conservation) Act, 1980, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the concern Addl. Principle Chief Conservator of Forests

(Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed;

24. The User Agency shall comply with the Hon'ble Supreme Court order on re-grassing, and re-grass the mining area and any other areas which may have been disturbed due to mining to restore them to a condition which is fit for growth of fodder, flora, fauna, etc. in a timely manner;
25. Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under;
26. The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;
27. No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;
28. The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;
29. The layout plan of the mining plan/ proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal;
30. The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;
31. No damage to the flora and fauna of the adjoining area shall be caused;
32. The State Govt. shall ensure that the that user agency and the State Forest Department shall create and maintain from funds to be provided by the user agency alternate habitat/ home for the avifauna, whose nesting trees are to be cleared in this project as per the plan duly approved by the Principal Chief Conservator of Forests (Wildlife) and the Chief Wildlife Warden Odisha. Bird nests artificially made out of eco-friendly materials shall be used in the area, including forest area and human settlements, adjoining the forest area being diverted for the project;
33. The State Govt. shall ensure that the user agency shall implement to take up works for construction and cleaning of garland drains, stabilizing retaining walls, proper terracing of OB dumps and checking gully formation resulting in soil erosion;
34. The State Govt. shall ensure that the user agency shall maintain that plants which are having lowest translocation factor can be preferred under afforestation on the OB dumps and fruit trees to be avoided in planting during biological stabilization of OB dumps;
35. The State Govt. shall implement R&R plan (if applicable) as the Rules and Regulations;
36. The State Govt. shall ensure that the user agency shall made all possible efforts to prevention of fall of wild animals into mining pit by fencing the open pit area;
37. Any other condition that the concerned Regional Office of this Ministry may

stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife;

38. The State Govt. shall ensure that the user agency shall maintain the angle of repose in OB dumps to be maintained to ensure stability and safety;
39. The State Govt. shall ensure that the user agency shall maintain that vetiver grass can be planted at the lower reaches of the dump to bind the soil and prevent soil erosion giving better stability to the dump;
40. The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project;
41. Violation of any of these conditions will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.16 of Chapter 1 of the Consolidated Guidelines and Clarifications on Van (Sanrakshan Evam Samvardhan) Adhiniyam, 198 as issued by this Ministry's letter dated 29.12.2023;
42. The User Agency shall submit the annual self -compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;
43. The State Government and user agency shall ensure compliance to all conditions stipulated in the *'in-principle'* approval letter dated 22.12.2023 for which undertakings have been obtained from the user agency and also the provisions of the all Acts, Rules, Regulations and Guidelines, relevant Hon'ble Court Order (S) and NGT Order (S), if any, or the time being in force, including compliance of the Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forests Rights) Act, 2006**;**
44. The monitoring report shall be uploaded on **e-portal** (https://parivesh.nic.in/) regularly; and
45. The State Government after receiving the 'Final' approval of the Central Government under sub-section (1) of section 2 of the Adhiniyam, and after fulfilment and compliance of the provisions of all other Acts and rules made thereunder, as applicable including ensuring settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007), shall issue order for diversion.

Yours faithfully,

Digitally signed by
SUNEET BHARDWAJ
Date: 30-07-2025
09:22:49

Sd/-
(Suneet Bhardwaj)
Assistant Inspector General of Forests

Copy to:

1. The PCCF (HoFF), Department of Forest, Government of Odisha, Bhubaneswar.
2. The DDGF (Central), Regional Office of MoEF&CC at Bhubaneswar.
3. The Nodal Officer (FCA), Department of Forest, Government of Odisha, Bhubaneswar.
4. User Agency

5. Monitoring Cell, FC Division, MoEF&CC, New Delhi for uploading on PARIVESH portal.

BY REGD. POST WITH AD

STATE POLLUTION CONTROL BOARD, ODISHA

[DEPARTMENT OF FOREST, ENVIRONMENT& CLIMATE CHANGE, GOVERNMENT OF ODISHA]
A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012
Phone-2561909, Fax: 2562822, 2560955 E-mail: paribesh1@ospcboard.org, Website: www.ospcboard.org

CONSENT ORDER

No. 15947 / IND-I-CON-7002 Dt. 25.08.2025 /

CONSENT ORDER NO.5056.

Sub: Consent for discharge of sewage and trade effluent under section 25/26 of Water (PCP) Act, 1974 and for existing / new operation of the plant under section 21 of Air (PCP) Act, 1981.

Ref: Your online application **No.5835587, dated 10-09-2024, your letter No.GM/OMQ/53/11-G, dated 31-07-2025 and online reply dated 12-08-2025.**

Consent to operate is hereby granted under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act, 1981 and rules framed thereunder to

Name of the Industry: **KALAMANG WEST (NORTHERN PART) BLOCK IRON ORE MINES OF M/S TATA STEEL LTD.**

Name of the Occupier & Designation: **SRI ATUL KUMAR BHATNAGAR, GENERAL MANAGER, OMQ**

Address: **AT: KALAMANG & GHODABUDANI, KOIRA, DIST: SUNDARGARH, ODISHA**

This consent order is valid for the period upto **31.03.2026.**

Details of Products Manufactured

Sl. No.	Product	Quantity
01.	*Iron Ore (ROM)*	*2.95 MTPA*

This consent order is valid for the specified outlets, discharge quantity and quality, specified chimney/stack, emission quantity and quality of emissions as specified below. This consent is granted subject to the general and special conditions stipulated therein.

A. Discharge permitted through the following outlet subject to the standard

Outlet No.	Description of outlet	Point of discharge	Quantity of discharge KLD	Prescribed Standard				
				pH	TSS (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)	Fecal Coliform (MPN/ 100 ml)
01	Septic tank (Domestic effluent)	Soak pit	--	5.5-9.0	200	100	--	--
02	Mine drainage water/ surface runoff/ other wastewater	On land /Inland surface water body	--	5.5-9.0	100 (Rainy day) 50 (Non-Rainy day)	-	10	--

B. Fugitive Emission Standards

(i)

Particulate Matter	1200 µg/m^3
Note : Fugitive emission shall be monitored in the predominant downwind direction at a distance 25.0 ± 2.0 metres from the source of fugitive emission as per following :	
Area	**Monitoring Location**
Mine face / Benches	Drilling, excavation and loading applicable for operating benches above water table
Haul Roads/ Service Roads	Haul roads to ore processing plant, waste dumps and loading areas and service road.
Crushing plant	Run-off mine unloading at hopper, crushing areas, screens and transfer points.
Screening plant	Screens, conveying and transportation of ore discharge points.
Ore storage and loading	Intermediate stock bin / pile areas, ore stock bin / pile areas, wagon / truck loading areas.
Waste dump	Active waste / reject dumps

(ii)

Chimney Stack No.	Description of Stack	Stack Height (m)	Quantity of Emission	Prescribed Standard			
				Emission Limits (g/kW-hr)			Smoke Limit (light absorption coefficient, m^{-1})
				NOx+HC	CO	PM	
1	DG sets of 3 x 850 KVA	As per Special Condition No.37	--	≤ 4.0	≤ 3.5	≤ 0.2	≤ 0.7

C. Disposal of solid waste permitted in the following manner

Sl. No.	Type of Solid waste	Quantity generated (TPD)	Quantity to be reused on site (TPD)	Quantity to be reused off site (TPD)	Quantity disposed off (TPD)	Description of disposal site.
01	Top soil & over burden	As per approved mining plan	--	--	--	As per approved mining plan

D. GENERAL CONDITIONS FOR ALL UNITS

1. The consent is given by the Board in consideration of the particulars given in the application. Any change or alternation or deviation made in actual practice from the particulars furnished in the application will also be the ground for liable to review/variation/revocation of the consent order under section 27 of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 and to make such variations as deemed fit for the purpose of the Acts.
2. The occupier would immediately submit revised application for consent to operate to this Board in the event of any change in the quantity and quality of raw material / products / manufacturing process or quantity /quality of the effluent rate of emission / air pollution control equipment / system etc.
3. The applicant shall not change or alter either the quality or quantity or the rate of discharge or temperature or the route of discharge without the previous written permission of the Board.
4. The application shall comply with and carry out the directives/orders issued by the Board in this consent order without any negligence on his/her part. In case of non-compliance of any order/directives issued at any time and/or violation of the terms and conditions of this consent order, the applicant shall be liable for legal action as per the provisions of the Law.
5. The applicant shall make an application for grant of fresh consent at least 90 days before the date of expiry of this consent order.
6. The issuance of this consent does not convey any property right in either real or personal property or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State laws or regulation.
7. This consent does not authorize or approve the construction of any physical structure or facilities or the undertaking of any work in any natural water course.
8. The applicant shall display this consent granted to him in a prominent place for perusal of the public and inspecting officers of this Board.
9. An inspection book shall be opened and made available to Board's Officers during the visit to the factory.
10. The applicant shall furnish to the visiting officer of the Board any information regarding the construction, installation or operation of the plant or of effluent treatment system / air pollution control system / stack monitoring system any other particulars as may be pertinent to preventing and controlling pollution of Water / Air.
11. The applicant shall display suitable caution board at the place where the effluent is entering into any water-body or any other place to be indicated by the Board, indicating therein that the area into which the effluents are being discharged is not fit for the domestic use/bathing.
12. Storm water shall not be allowed to mix with the trade and/or domestic effluent on the upstream of the terminal manholes where the flow measuring devices will be installed.
13. The applicant shall maintain good house-keeping both within the factory and the premises. All pipes, valves, sewers and drains shall be leak-proof. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
14. The applicant shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems install or used by him to achieve with the term(s) and conditions of the consent.
15. Care should be taken to keep the anaerobic lagoons, if any, biologically active and not utilized as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed impervious.
16. The utilization of treated effluent on factory's own land, if any, should be completed and there should be no possibility of the effluent gaining access into any drainage channel or other water courses either directly or by overflow.
17. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.
18. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes a matter of dispute, the occupier must adopt alternate satisfactory treatment and disposal measures.
19. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be taken to equalization tank.
20. The effluent treatment units and disposal measures shall become operative at the time of commencement of production.
21. The applicant shall provide port holes for sampling the emissions and access platform for carrying out stack sampling and provide electrical outlet points and other arrangements for chimneys/stacks and other sources of emissions so as to collect samples of emission by the Board or the applicant at any time in accordance with the provision of the Acts or Rules made therein.
22. The applicant shall provide all facilities and render required assistance to the Board staff for collection of samples / stack monitoring / inspection.

23. The applicant shall not change or alter either the quality or quantity or rate of emission or install, replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in any change in quality and/or quantity of emissions, without the previous written permission of the Board.

24. No control equipments or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of the Board.

25. The liquid effluent arising out of the operation of the air pollution control equipment shall be treated in the manner so as to meet the standards prescribed by the Board in accordance with the provisions of Water (Prevention and Control of Pollution) Act, 1974 (as amended).

26. The stack monitoring system employed by the applicant shall be opened for inspection to this Board at any time.

27. There shall not be any fugitive or episodal discharge from the premises.

28. In case of such episodal discharge/emissions the occupier shall take immediate action to bring down the emission within the limits prescribed by the Board and stop the operation of the plant if required. Report of such accidental discharge /emission shall be brought to the notice of the Board within 24 hours of occurrence.

29. The applicant shall keep the premises and air pollution control equipments clean and make all hoods, pipes, valves, stacks/chimneys leak proof. The air pollution control equipments, location, inspection chambers, sampling port holes shall be made easily accessible at all times.

30. Any upset condition in any of the plant/plants of the factory which is likely to result in increased effluent discharge/emission of air pollutants and / or result in violation of the standards mentioned shall be reported to the Headquarters and Regional Office of the Board by E-mail within 2 hours of its occurrence.

31. The occupier has to ensure that minimum three varieties of trees are planted at the density of not less than 1000 trees per acre. The trees may be planted along boundaries of the premises. This plantation is stipulated over and above the bulk plantation of trees in that area.

32. The solid waste such as sweeping, wastage packages, empty containers residues, sludge including that from air pollution control equipments collected within the premises of the shall be disposed off scientifically to the satisfaction of the Board.

33. All solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board by :

    i) Land fill in case of inert material, care being taken to ensure that the material does not give rise to leachate which may percolate into ground water or carried away with storm run-off.

    ii) Controlled incineration, wherever possible in case of combustible organic material.

    iii) Composting, in case of bio-degradable material.

34. Any toxic material shall be detoxicated if possible, otherwise be sealed in steel drums and buried in protected areas after obtaining approval of this Board in writing. The detoxication or sealing and burying shall be carried out in the presence of Board's authorized persons only. Letter of authorization shall be obtained for handling and disposal of hazardous wastes.

35. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard, vary all or any of such condition and thereupon the applicant shall be bound to comply with the conditions so varied.

36. The applicant, his/heirs/legal representatives or assignees shall have no claim whatsoever to the condition or renewal of this consent after the expiry period of this consent.

37. The Board reserves the right to review, impose additional conditions or condition, revoke change or alter the terms and conditions of this consent.

38. Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves to it the right and power under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Act by the Board.

39. The conditions imposed as above shall continue to be in force until revoked under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 A of Air (Prevention & Control of Pollution) Act, 1981.

40. The occupier shall comply to the conditions stipulated in CTE order issued by Odisha State Pollution Control Board and conditions stipulated in Environmental Clearances issued by MoEF&CC, Govt. of India.

41. The occupier shall abide by E(P) Act, 1986 and Rules framed there-under.

42. In case the consent fee is revised upward during this period, the industry shall pay the differential fees to the Board (for the remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.

GENERAL CONDITIONS FOR UNITS WITH INVESTMENT OF MORE THAN Rs 50 CRORES, AND 17 CATEGORIES OF HIGHLY POLLUTING INDUSTRIES (RED A).

1. The applicant shall analyse the emissions every month for the parameters indicated in TABLE. B & C as mentioned in this order and shall furnish the report thereof to the Board by the 10th of the succeeding month.

2. The applicant shall provide and maintain at his own cost three ambient air quality monitoring stations for monitoring Suspended Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen, Hydro-Carbon, Carbon-Monoxide and monitor the same once in a day/week/fortnight/month. The data collected shall be maintained in a register and a monthly extract be furnished to the Board.

3. The applicant shall provide and maintain at his own cost a meteorological station to collect the data on wind velocity, direction, temperature, humidity, rainfall, etc. and the daily reading shall be recorded and the extract sent to the Board once in a month.

4. The applicant shall forward the following information to the Member Secretary, State Pollution Control Board, Odisha, Bhubaneswar regularly.

   a) Report of analysis of stack monitoring, ambient air quality monitoring meteorological data as required every month.
   b) Progress on planting of trees quarterly.

5. The applicant shall install mechanical composite sampling equipment and continuous flow measuring / recording devices on the effluent drains of trade as well as domestic effluent. A record of daily discharge shall be maintained.

6. The following information shall be forwarded to the Member Secretary on or before 10th of every month.

   a) Performance / progress of the treatment plant.
   b) Monthly statement of daily discharge of domestic and/or trade effluent.

7. Non-compliance with effluent limitations

   a) If for any reason the applicant does not comply with or is unable to comply with any effluent limitations specified in this consent, the applicant shall immediately notify the consent issuing authority by telephone and provide the consent issuing authority with the following information in writing within 5 days of such notification.

      i) Causes of non-compliance.

      ii) A description of the non-compliance discharge including its impact on the receiving waters.

      iii) Anticipated time of continuance of non-compliance if expected to continue or if such condition has been corrected the duration or period of non-compliance.

      iv) Steps taken by the applicant to reduce and eliminate the non-complying discharge and

      v) Steps to be taken by the applicant too prevent the condition of non-compliance.

   b) The applicant shall take all reasonable steps to minimize any adverse impact to natural waters resulting from non-compliance with any effluent limitation specified in this consent including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

   c) Nothing in this consent shall be construed to relieve the applicant from civil or criminal penalties for non-compliance whether or not such non-compliance is due to factors beyond his control, such as break-down, electric failure, accident or natural disaster.

8. The applicant shall at his own cost get the effluent samples collected both before and after treatment and get them analysed at an approval laboratory every month for the parameters indicated in Part-D and shall submit in duplicate the report thereof to the Board.

9. The addition of various treatment chemicals should be done only with mechanical dozers and proper equipment for regulation of correct dosages determined daily and for proper uniform feeding. Crude practices such as dumping of chemicals in drains or sumps or trickling of acids or alkalies arbitrarily and utilizing poles for stirring etc. should not be resorted to.

10. In the disposal of treated effluent on land for irrigation, the industry shall keep in view of the need for:

    a) Rotation of crops
    b) Change of point of application of effluent on land
    c) A portion of land kept fallow.

11. The adoption of these would avoid soil becoming sick or slate, the industry may ensure this in consultation with the Agriculture Department.

12. It is the sole responsibility of the industry to ensure that there are no complaints at any time from the royats in the surrounding areas as a result of discharge of sewage or trade effluent if any.

13. Proper housekeeping shall be maintained by a dedicated team.

14. The industry must constitute a team of responsible and technically qualified personnel who will ensure continuous operation of all pollution control devices round the clock (including night hours) and should be in a position to explain the status of operation of the pollution control measures to the inspecting officers of the Board at any point of time. The name of these persons with their contact telephone numbers shall be intimated to the concerned, Regional Officer and Head Office of the Board and in case of any change in the team it shall be intimated to the Board immediately.

E. SPECIAL CONDITIONS:

1. This Consent Order to the aforesaid project is under provisions of Water (PCP) Act, 1974 and Air (PCP) Act, 1981. It does not tantamount to approvals / consent / permissions etc. required to be obtained under any other Act / Rule / Regulation. Mining operation is subject to availability of all other statutory clearances required under relevant Acts/Rules.
2. The commencement of mining operation shall be subject to permission from MoEF & CC, Govt. of India and State Forest Department.
3. This consent order is subject to permission from Steel and Mines Department, Government of Odisha for commencement of mining operation.
4. The quantity of production shall be determined on a monthly pro-rata basis from the date of issue of this order. If the date of issue is 15th of the month, or earlier, then the entire month will be considered for calculation, otherwise the quantity shall be determined from the next month on pro-rata basis.
5. The proposed control measures for air and water shall be implemented before commencement of mining operation and compliance report, in this regard shall be submitted to Board for necessary verification.
6. Drills shall either be operated with dust extractors or equipped with water injection system to minimize dust generation in the work environment.
7. Controlled blasting shall be practiced to minimize generation of dust and fly rocks.
8. Regular water sprinkling through mobile water tankers shall be carried out in critical areas prone to air pollution such as alongside haul roads, approach road, active OB dumps and mine benches at frequent interval so that it should always remain in wet condition. The permanent internal haul roads shall be made blacktopped.
9. Fixed auto sprinklers shall be provided on both sides of major haul road and approach road of the mine. Fog canons shall be deployed at ore stack yard for efficient dust suppression during loading and unloading of minerals.
10. Effort shall be made to use chemical binders/wetting agents alongwith sprinkled water in order to reduce water consumption and to improve retention and re-absorption capacity of water.
11. This Consent Order does not include any mineral crushing and screening units. The crushing and screening plants as approved in Environmental Clearance and Consent to establish shall be installed with all pollution control devices and obtain permission from Board before commencement of operation.
12. Haulage roads shall be devoid of ruts and potholes and shall be maintained properly to avoid generation of dust during movement of vehicles.
13. Mechanized wheel washing facility for the ore transport vehicles shall be provided at the exit point of the mine. The wheel washing facility shall be integrated with complete recirculation system.
14. The vehicles carrying ore for transportation from the mine shall be covered with tarpaulin (both bottom & top).
15. Fog cannon of at least 40 m throw shall be deployed at fine ore stock piles and loading areas in the mine.
16. A truck parking plaza shall be developed with its runoff management facilities.

17. Regular water sprinkling on mineral transportation roads passing through the habitation area as well as other strategic point on the National Highway shall be done jointly by the mining lessees in consultation with the Regional Officer.
18. Four Ambient Air Quality Monitoring Stations shall be established in core zone and buffer zone for monitoring of ambient air quality and location of the stations shall be decided in consultation with the Regional Officer, State Pollution Control Board based on the metrological data, topographical features and environmentally and ecologically sensitive targets.
19. The monitoring of ambient air quality shall be carried out twice in a week (24 hourly) at a particular site and the consolidated data shall be submitted to the State Pollution Control Board, once in a year.
20. The ambient air quality shall remain within prescribed national ambient air quality standards.
21. Fugitive Dust Emission Monitoring shall be carried out at the places as stated in Part-B of this order. The monitoring of fugitive dust shall be carried out twice in a week (24 hourly) at a particular site and consolidated data shall be submitted to the State Pollution Control Board, once in a year.
22. Three Continuous Ambient Air Quality Monitoring Stations (CAAQMS), with data transfer facility to SPCB server shall be established in core and buffer zone. The locations of these stations shall be decided in consultation with the Regional Officer, State Pollution Control Board, based on metrological data, topographical features and environmentally and ecologically sensitive targets. Till the CAAQMS are installed and operated, the monitoring of AAQ shall be done in accordance to the Special Condition No. 18 & 19.
23. The topsoil generated shall be stored at earmarked site (s) only and stabilized with plantation or shall be used for land reclamation and plantation.
24. The over burden generated during the course of mining shall be stacked at earmarked dump site (s) and stabilized with plantation or used for reclamation of excavated land followed by plantation. Backfilling activity shall be done in accordance to approved mining plan.
25. The project proponent shall ensure that no natural watercourse and / or water resources are obstructed due to any mining operations. In case of diversion of natural watercourse, this shall be done with prior permission of the competent authority.
26. Check dams and check weirs shall be constructed at appropriate places of the mine lease area to prevent direct flow of runoff to nearby water bodies. The surface runoff water from the existing runoff management system shall meet the prescribed standards.
27. Retention wall shall be constructed at the toe of topsoil dump and OB dump. Garland drain shall be constructed around topsoil dumps, over burden dumps and mineral stack yards terminating at settling pit to prevent direct disposal of runoff to nearby water bodies.
28. Garland drain and sedimentation pit shall be de-silted after monsoon or as and when required. The runoff discharge quality from runoff management system shall meet the standards prescribed.
29. Domestic effluents shall be treated in a sewage treatment plant (STP) and or shall be discharged to soak pit via septic tank constructed as BIS specification. The

treated wastewater quality of STP shall remain within the following standards and shall be used for plantation:

pH	-	6.5 -9.0
TSS	-	<100 mg/l
BOD	-	30 mg/l
Fecal Coliform	-	<1000 MPN/100 ml.

30. ETP comprising of oil and grease trap with sedimentation pit shall be provided for treatment of workshop effluent and treated effluent shall remain within the following prescribed standards and shall be re-used for washing of vehicles:

pH	-	6.5 -8.5
TSS	-	50 mg/l
Oil & Grease	-	10 mg/l
COD	-	150 mg/l

31. Regular monitoring of water quality of upstream and downstream of surface water bodies existed if any within 5 Km shall be carried out once in every month and record shall be maintained and submitted to the State Pollution Control Board once in every year. Monitoring shall be carried out through MoEF & CC accredited laboratory.
32. Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells. The monitoring should be done four times a year in pre-monsoon (April/May), monsoon (August), post-monsoon (November) and winter (January) seasons. Consolidated data thus collected should be submitted to the Board annually.
33. The mine shall take necessary action for compliance with the air and water quality standards as stipulated in Part-A and Part-B of this order.
34. Adequate measures shall be taken for control of noise levels in the work environment of mine area so that noise levels at the boundary line of mining lease area shall not exceed 75 dB(A) during day time (6.00 AM to 9.00 PM) and 70 dB(A) during night time (9.00 PM to 6 AM).
35. Ambient air quality monitoring data, noise monitoring data and water / wastewater quality monitoring data shall be electronically displayed at the entry point of the mine or at a suitable location of the mine.
36. The height of the stack connected to DG sets of capacity more than 800 KW (1000 KVA) shall conform to the following:
    i) $14Q^{0.3}$, Q = Total SO_2 emission from the plant in kg/hr.
    ii) Minimum 6m. above the building where generator set is installed.
    iii) 30 m.
37. The height of the stack connected to DG set of capacity less than and upto 800 KW (1000 KVA) shall conform to the following:
    i) $H = h+0.2\sqrt{KVA}$
    ii) h= Height of the building where it is installed in meter
    iii) KVA = Capacity of DG set
    iv) H = Height of the stack in meter above ground level.
38. All DG sets installed before 1.7.2004 shall be scrapped. DG sets complying with either State-I or Stage-II emission norms shall reduce Particulate Matter Emission by 70% by installing RECD without affecting any other emission parameters as per the CPCB guidelines and Board's letter vide No.17927, dated 14.11.2023 and letter No.7146, dated 10.05.2024, in this regard.

39. Plantation of trees shall be undertaken in the colony/ township, over topsoil dumps, OB dumps, along the side of haul road and in other areas of the mines not being utilized for mining activities. The mine shall take up avenue plantation and plantation in nearby village areas in consultation with DFO/Horticulture Department. The annual plantation details shall be submitted to the Board by 30th April every year.
40. A copy of the annual return (annual return submitted to IBM, Govt. of India/ Directorate of Mines, Govt. of Odisha) shall be submitted to this Board every year.
41. The environmental statement report for the financial year ending 31st March shall be submitted to the Board in Form-V on or before 30th September every year.

MEMBER SECRETARY
STATE POLLUTION CONTROL BOARD, ODISHA

TO,

SRI ATUL KUMAR BHATNAGAR,
GENERAL MANAGER, OMQ
KALAMANG WEST (NORTHERN PART) BLOCK IRON ORE MINES OF M/S TATA STEEL LIMITED,
AT: KALAMANG & GHODABUDANI, KOIRA, DIST: SUNDARGARH, ODISHA

Memo No._____/Dt._____/

Copy forwarded to :

i) Regional Officer, State Pollution Control Board, **Rourkela.**
ii) District Collector, **Sundargarh / Keonjhar**
iii) Director of Mines, Govt. of Odisha, Bhubaneswar
iv) Director, Environment-cum-Special Secretary, F, E & CC Deptt., Govt. of Odisha, Bhubaneswar.
v) D.F.O, **Bonai / Keonjhar**
vi) Deputy Director of Mines, **Koira, Sundargarh / Joda, Keonjhar.**
vii) Chief Env. Scientist, Central Lab., SPCB, Bhubaneswar
viii) Addl. Chief Env. Scientist, (Hazardous Waste Management Cell)
ix) Guard File

CHIEF ENV. ENGINEER (M)
STATE POLLUTION CONTROL BOARD, ODISHA

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS PART – A : EFFLUENTS

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
1.	Colour & odour	Colourless/ Odourless as far as practible	--	See 6 of Annex-1	See 6 of Annex-1
2.	Suspended Solids (mg/l)	100	600	200	a. For process wastewater – 100 b. For cooling water effluent 10% above total suspended matter of influent.
3.	Particular size of SS	Shall pass 850	--	--	--
5.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature	Shall not exceed 5^0C above the receiving water temperature	--	--	Shall not exceed 5^0C above the receiving water temperature
7.	Oil & Grease mg/l max.	10	20	10	20
8.	Total residual chlorine	1.0	--	--	1.0
9.	Ammonical nitrogen (as N) mg/l max.	50	50	--	50
10.	Total Kajeldahl nitrogen (as NH_3) mg/1 max.	100	--	--	100
11.	Free ammonia (as NH_3) mg/1 max.	5.0	--	--	5.0
12.	Biochemical Oxygen Demand (5 days at (20°C) mg/1 max.	30	350	100	100
13.	Chemical Oxygen Demand, mg/1 max.	250	--	--	250
14.	Arsenic (as As) mg/1 max.	0.2	0.2	0.2	0.2
15.	Mercury (as Hg) mg/1 max.	0.01	0.01	--	0.001
16.	Lead (as pb) mg/1 max.	1.0	1.0	--	2.0
17.	Cardmium (as Cd) mg/1 max.	2.0	1.0	--	2.0

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
18.	Hexavalent Chromium (as Cr + 6) mg/l max.	0.1	2.0	--	1.0
19.	Total Chromium (as Cr) mg/l max.	2.0	2.0	--	2.0
20.	Copper (as Cu) mg/l max.	3.0	3.0	--	3.0
21.	Zinc (as Zn) mg/l max.	5.0	15	--	15
22.	Selenium (as Sc) mg/l max.	0.05	0.05	--	0.05
23.	Nickel (as Nil) mg/l max.	3.0	3.0	--	5.0
24.	Cyanide (as CN) mg/l max.	0.2	2.0	0.2	0.02
25.	Fluoride (as F) mg/l max.	2.0	15	--	15
26.	Dissolved Phosphates (as P) mg/l max.	5.0	--	--	--
27.	Sulphide (as S) mg/l max.	2.0	--	--	5.0
28.	Phennolic compounds as (C_6H_5OH) mg/l max.	1.0	5.0	--	5.0
29.	Radioactive materials a. Alpha emitter micro curle/ml. b. Beta emitter micro curle/ml.	 10^{-7} 10^{-8}	 10^{-7} 10^{-8}	 10^{-8} 10^{-7}	 10^{-7} 10^{-8}
30.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
31	Manganese (as Mn)	2 mg/l	2 mg/l	--	2 mg/l
32.	Iron (Fe)	3 mg/l	3 mg/l	--	3 mg/l
33.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
34.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutants	Time Weighed Average	Concentrate of Ambient Air		
			Industrial Residential, Rural and other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1.	Sulphur Dioxide (SO_2), $\mu g/m^3$	Annual *	50	20	-Improved west and Gaeke
		24 Hours **	80	80	- Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual *	40	30	- Modified Jacob & Hochheiser (Na-Arsenite)
		24 Hours **	80	80	- Chemiluminescence
3.	Particulate Matter (size less than 10µm) or $PM_{10}\mu g/m^3$	Annual *	60	60	-Gravimetric - TOEM
		24 Hours **	100	100	- Beta Attenuation
4.	Particulate Matter (size less than 2.5µm) or $PM_{2.5}\mu g/m^3$	Annual *	40	40	-Gravimetric - TOEM
		24 Hours **	60	60	- Beta Attenuation
5.	Ozone (O_3) $\mu g/m^3$	8 Hours **	100	100	- UV Photometric - Chemiluminescence
		1 Hours **	180	180	- Chemical Method
6.	Lead (Pb) $\mu g/m^3$	Annual *	0.50	0.50	-AAS/ICP method after sampling on EMP 2000 or equivalent filter paper.
		24 Hours **	1.0	1.0	- ED-XRF using Teflon filter
7.	Carbon Monoxide (CO) mg/m^3	8 Hours **	02	02	- Non Dispersive Infra Red (NDIR)
		1 Hours **	04	04	Spectroscopy
8.	Ammonia (NH_3) $\mu g/m^3$	Annual*	100	100	-Chemiluminescence - Indophenol Blue Method
		24 Hours**	400	400	
9.	Benzene (C_5H_6) $\mu g/m^3$	Annul *	05	05	-Gas Chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP)-Particulate phase only, ng/m^3	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11.	Arsenic (As), ng/m^3	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni),ng/m^3	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Annexure-5

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Kalamang West (northern Part) Iron Ore Mines In Respect Of M/s Tata Steel Ltd		
Project Address:	Village-kalamang And Ghodabudani		
Village:	Kalmanga	Block:	Koida
District:	Sundargarh	State:	Odisha
Pin Code:			
Communication Address:	Bombay House, 24 Homi Mody Steet Fort, Mumbai-400001, Mumbai, Mumbai, Maharashtra - 400001		
Address of CGWB Regional Office :	Central Ground Water Board South Eastern Region, Bhujal Bhawan, Khandagiri Square, Nh-5, Bhubaneshwar, Khordha, Odisha - 751030		

1.	**NOC No.:**	CGWA/NOC/MIN/REN/1/2024/10145	2.	**Date of Issuence**	12/11/2024
3.	Application No.:	21-4/3864/OR/MIN/2022	4.	Category: (GWRE 2023)	Safe
5.	Project Status:	Existing With Additional Ground Water Requirment	6.	NOC Type:	Renewal
7.	**Valid from:**	01/09/2024	8.	**Valid up to:**	31/08/2026

9. Ground Water Abstraction Permitted:

Fresh Water		Saline Water		Dewatering		Total	
m³/day	m³/year	m³/day	m³/year	m³/day	m³/year	m³/day	m³/year
100.00	36500.00					100.00	36500.00

10. Details of ground water abstraction /Dewatering structures

	Total Existing No.:0						Total Proposed No.:2					
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*	0	0	0	0	0	0	0	0	2	0	0	0

*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps

11.	Ground Water Abstraction/Restoration Charges paid (Rs.):	36500.00
12.	Environment Compensation (if applicable) paid (Rs.):	0.00

13.	Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers	Monitoring Mechanism		
			Manual	DWLR**	DWLR With Telemetry
	**DWLR - Digital Water Level Recorder	1	0	1	0

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

CENTRAL GROUND WATER AUTHORITY

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011
Phone: (011) 23383561 Fax: 23382051, 23386743
Website: cgwa-noc.gov.in

Annexure-6

To,

The Sarpanch
Guali Gram Panchayat
Guali, Dist- Keonjhar

Ref: JCO/13/175/118
Dated: 19th Oct' 2022

Sub: Environmental Clearance of M/s Tata Steel Limited for Kalamang West (Northern Part) Iron Mine of M/s Tata Steel Limited has been granted for mining of Iron Ore with Production Capacity of 2.95 MTPA (RoM) at Village- Kalamang & Ghodabudani, District- Sundergarh & Village - Gandhalpada, District - Keonjhar, Odisha (ML Area: 92.875 ha)

Ref: SEIAA, Odisha File No. 55807/89-MINB1/06-2022 (EC Identification No. - EC22B001OR117596, dated 18th October 2022)

Dear Sir,

Environmental Clearance of M/s Tata Steel Limited for Kalamang West (Northern Part) Iron Mine of M/s Tata Steel Limited has been granted for mining of Iron Ore with Production Capacity of 2.95 MTPA (RoM) at Village- Kalamang & Ghodabudani, District- Sundergarh & Village - Gandhalpada, District - Keonjhar, Odisha (ML Area: 92.875 ha). A copy of EC is enclosed for reference.

Thanking you,

Yours sincerely,
f: Tata Steel Limited

Chief (Kalamang & Gandhalpada Project)
Tata Steel Limited

Sarpanch
GUALI GRAM PANCHAYAT
GUALI

Encl: As above

TATA STEEL LIMITED
Mines Division Joda Keonjhar, Odisha 758 034 Tel 91 9238101031
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

o/c

To,

The Sarpanch
Malda Gram Panchayat
Malda, Dist- Sundergarh

Ref: JCO/13/174/118
Dated: 19th Oct' 2022

Sub: Environmental Clearance of M/s Tata Steel Limited for Kalamang West (Northern Part) Iron Mine of M/s Tata Steel Limited has been granted for mining of Iron Ore with Production Capacity of 2.95 MTPA (RoM) at Village- Kalamang & Ghodabudani, District- Sundergarh & Village - Gandhalpada, District - Keonjhar, Odisha (ML Area: 92.875 ha)

Ref: SEIAA, Odisha File No. 55807/89-MINB1/06-2022 (EC Identification No. - EC22B001OR117596, dated 18th October 2022)

Dear Madam,

Environmental Clearance of M/s Tata Steel Limited for Kalamang West (Northern Part) Iron Mine of M/s Tata Steel Limited has been granted for mining of Iron Ore with Production Capacity of 2.95 MTPA (RoM) at Village- Kalamang & Ghodabudani, District- Sundergarh & Village - Gandhalpada, District - Keonjhar, Odisha (ML Area: 92.875 ha). A copy of EC is enclosed for reference.

Thanking you,

Yours sincerely,
f: Tata Steel Limited

Chief (Kalamang & Gandhalpada Project)
Tata Steel Limited

Encl: As above

Suruball Patra
Sarpanch Malda G.P
Pin-770048

News paper Advertisement in English Daily, Sunday Pioneer dated 23.10.2022

sunday pioneer

sports 08

NZ CRUSH AUSTRALIA BY 89 RUNS IN SUPER 12 OPENER



We were very clinical in what we needed to do: Williamson



All-round England beat Afghanistan by 5 wickets after Curran's 5/10



We have plans for everyone, not just Surya: Babar



Surya tells me he will take his chances, just wants me to be there: Kohli



Strategy to deal with Shaheen is to play within 'V': Tendulkar

The Match: Confident India hoping to turn tables on Pakistan



AFFIDAVIT

Newspaper Advertisement in Odiya Daily, Pragativadi dated 23.10.2022



Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002209F
Report No.: ALPL/02052025/3-1 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/140425/ENV-6/10-1 & 2
		Reference to sampling plan	ANId/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01/04/2025 to 02/04/2025 & 04/04/2025 to 05/04/2025)	Sample Inward Date	14/04/20258
Test Started On:-	15/04/2025	Test Completed On:-	17/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos , 8 hrly each	1No. 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS 5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	01.04.2025	59.6	22.4	12.6	24.1	BLQ (LOQ-0.5)
		04.04.2025	55.9	19.3	10.4	20.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= Below limit of quantification , LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06)

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

---End of Report---

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002210F
Report No.: ALPL/02052025/3-2 dated:02/05/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/952
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/140425/ENV-6/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01/04/2025 to 02/05/2025 & 04/04/2025 to 05/04/2025)	Sample Inward Date	14/04/20258
Test Started On:-	15/04/2025	Test Completed On:-	17/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	01.04.2025	59.3	24.1	13.5	22.8	BLQ (LOQ-0.5)
		04.04.2025	64.1	21.3	14.5	25.3	BLQ (LOQ-0.6)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark 'Original Test Report' to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

Anacon Laboratories Pvt. Ltd. Nagpur Lab
FP-34, 35,Food Park, Five Star Industrial Estate, MIDC Butibori, Nagpur, Maharashtra, India - 441 122
+ 91 8045685558 Email : info@anacon.in
https: // www.anaconlabcratories.com

Test Report

ULR No.-TC129982500002212F
Report No.: ALPL/02052025/3-4 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/140425/ENV-6/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01/04/2025 to 02/05/2025 & 04/04/2025 to 05/04/2025)	Sample Inward Date	14/04/20258
Test Started On:-	15/04/2025	Test Completed On:-	17/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	01.04.2025	57.9	20.6	13.6	19.4	BLQ (LOQ-0.5)
		04.04.2025	60.1	22.9	12.3	21.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvay
Deputy Quality Manager

---End of Report---

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002211F
Report No.: ALPL/02052025/3-3 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/140425/ENV-6/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01/04/2025 to 02/05/2025 & 04/04/2025 to 05/04/2025)	Sample Inward Date	14/04/20256
Test Started On:-	15/04/2025	Test Completed On:-	17/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Kalesahi Village (Buffer Zone)	01.04.2025	55.4	21.3	13.4	20.4	BLQ (LOQ-0.5)
		04.04.2025	51.8	18.6	10.4	19.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● This report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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Test Report

ULR No.-TC129982500002213F
Report No.: ALPL/02052025/3-5 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/140425/ENV-6/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01/04/2025 to 02/05/2025 & 04/04/2025 to 05/04/2025)	Sample Inward Date	14/04/20258
Test Started On:-	15/04/2025	Test Completed On:-	17/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	01.04.2025	61.7	24.9	12.9	26.1	BLQ (LOQ-0.5)
		04.04.2025	66.2	29.7	15.3	24.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500002214F
Report No.: ALPL/0205/2025/3-6 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/150425/ENV-6/5-1
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/03/2025 to 13/03/2025)	Sample Inward Date	15/04/2025
Test Started On:-	16/04/2025	Test Completed On:-	18/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	12.04.2025	56.4	20.5	10.7	19.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be related to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.3/06).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Sneha Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002216F
Report No.: ALPL/02052025/3-7 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/982
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/150425/ENV-6/5-2
		Reference to sampling plan	ANId/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/04/2025 to 13/04/2025)	Sample Inward Date	15/04/20258
Test Started On:-	16/04/2025	Test Completed On:-	18/04/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No. 24hrs	5Nos. 4 hrly each	5Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalmang Village (Buffer Zone)	12.04.2025	58.3	22.1	12.3	20.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500002216F
Report No.: ALPL/02052025/3-8 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/150425/ENV-6/5-3
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/04/2025 to 13/04/2025)	Sample Inward Date	15/04/20258
Test Started On:-	16/04/2025	Test Completed On:-	16/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Kateshahi Village (Buffer Zone)	12.04.2025	58.4	23.7	13.9	22.1	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Srishal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500002217F
Report No.: ALPL/02062025/3-9 dated 02/05/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/150425/ENV-6/5-4
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/04/2025 to 13/04/2025)	Sample Inward Date	15/04/2025
Test Started On:-	15/04/2025	Test Completed On:-	16/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No. 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	12.04.2025	55.6	20.4	12.9	19.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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Test Report

ULR No.-TC129982500002218F
Report No.: ALPL/02052025/3-10 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/150425/ENV-6/5-5
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/04/2025 to 13/04/2025)	Sample Inward Data	15/04/20258
Test Started On:-	16/04/2025	Test Completed On:-	18/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Malde Village (Buffer Zone)	12.04.2025	60.7	26.8	13.4	18.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QM/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002219F
Report No.: ALPL/02052025/3-11 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/240425/ENV-6/25-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 15/04/2025 to 16/04/2025 & 17/04/2025 to 18/04/2025)	Sample Inward Date	24/04/2025
Test Started On:-	25/04/2025	Test Completed On:-	26/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	15.04.2025	58.3	23.5	13.8	24.9	BLQ (LOQ-0.5)
		17.04.2025	53.9	20.6	10.7	21.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark 'Original Test Report' to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002220F
Report No.: ALPL/02052025/3-12 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/240425/ENV-6/25-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 15/04/2025 to 16/04/2025 & 17/04/2025 to 18/04/2025)	Sample Inward Date	24/04/2025
Test Started On:-	25/04/2025	Test Completed On:-	26/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 6 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalmang Village (Buffer Zone)	15.04.2025	60.8	19.4	9.4	18.2	BLQ (LOQ-0.5)
		17.04.2025	57.6	20.1	10.8	21.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982600002222F
Report No.: ALPL/02052025/3-14 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/982
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/240425/ENV-6/25-5 & 6
		Reference to sampling plan	ANld/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 15/04/2025 to 16/04/2025 & 17/04/2025 to 18/04/2025)	Sample Inward Date	24/04/2025
Test Started On:-	25/04/2025	Test Completed On:-	26/04/2025
Sampling Method	ANld/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	15.04.2025	62.3	22.8	13.4	24.9	BLQ (LOQ-0.5)
		17.04.2025	59.4	20.3	10.6	20.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification, LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Sneha Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002221F
Report No.: ALPL/020520253-13 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/240425/ENV-6/25-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 17/03/2025 to 18/03/2025 & 21/03/2025 to 22/03/2025)	Sample Inward Date	25/03/2025
Test Started On:-	25/03/2025	Test Completed On:-	27/03/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each;	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
L	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	15.04.2025	56.4	20.9	10.6	19.1	BLQ (LOQ-0.5)
		17.04.2025	60.9	23.4	13.5	25.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Srichal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129062500002223F
Report No.: ALPL/02052025/3-15 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/240425/ENV-6/25-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyebrata Dhal (Sampling duration Period 16/04/2025 to 16/04/2025 & 17/04/2025 to 18/04/2025)	Sample Inward Date	24/04/2025
Test Started On:-	25/04/2025	Test Completed On:-	26/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	15.04.2025	59.4	23.3	12.8	18.3	BLQ (LOQ-0.5)
		17.04.2025	55.9	21.6	11.3	19.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification, LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500002224F
Report No.: ALPL/02052025/3-16 dated:02/05/2026

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126598/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/280425/ENV-6/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 22/04/2025 to 23/04/2025 & 25/04/2025 to 26/04/2025)	Sample Inward Date	25/04/2025
Test Started On:-	29/04/2025	Test Completed On:-	30/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Gual Village (Buffer Zone)	22.04.2025	58.6	24.1	13.8	21.4	BLQ (LOQ-0.5)
		25.04.2025	62.9	26.4	11.6	26.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in

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TC-12998

Test Report

ULR No.-TC129982500002225F
Report No.: ALPL/020520225/3-17 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596982
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/280425/ENV-6/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 22/04/2025 to 23/04/2025 & 25/04/2025 to 26/04/2025)	Sample Inward Date	28/04/2025
Test Started On:-	29/04/2025	Test Completed On:-	30/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each.	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	22.04.2025	60.1	22.8	13.1	25.8	BLQ (LOQ-0.5)
		25.04.2025	59.4	20.3	10.8	20.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982600002227F
Report No.: ALPL/0205/2025/3-19 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/062
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/280425/ENV-8/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 22/04/2025 to 23/04/2025 & 25/04/2025 to 26/04/2025)	Sample Inward Date	28/04/2025
Test Started On:-	29/04/2025	Test Completed On:-	30/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No. 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	22.04.2025	61.9	22.7	12.9	24.1	BLQ (LOQ-0.5)
		25.04.2025	55.6	21.8	10.4	21.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be relevant to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002226F
Report No.: ALPL/02052025/3-18 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/280425/ENV-6/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 22/04/2025 to 23/04/2025 & 25/04/2025 to 26/04/2025)	Sample Inward Date	28/04/2025
Test Started On:-	29/04/2025	Test Completed On:-	30/04/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-4D(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	22.04.2025	56.2	23.8	12.5	23.9	BLQ (LOQ-0.5)
		25.04.2025	59.7	21.6	12.4	25.1	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification, LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.1/06).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002228F
Report No.: ALPL/02052025/3-20 dated:02/05/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/260425/ENV-6/10-9 & 10
		Reference to sampling plan	ANld/7.3/Mon-02/April-2025/2
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 22/04/2025 to 23/04/2025 & 25/04/2025 to 26/04/2025)	Sample Inward Date	26/04/2025
Test Started On:-	29/04/2025	Test Completed On:-	30/04/2025
Sampling Method	ANld/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	22.04.2025	58.3	20.2	10.63	19.3	BLQ (LOQ-0.5)
		25.04.2025	55.1	21.8	9.8	21.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/66).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002907F
Report No.: ALPL/03062025/3-1 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/12062025/ENV-7/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 05/05/2025 to 08/05/2025 & 09.05.2025 to 10/05/2025	**Sample Inward Date**	12/05/2025
Test Started On:-	13/05/2025	**Test Completed On:-**	16/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	05.05.2025	* 59.6	22.4	12.6	24.1	BLQ (LOQ-0.5)
		09.05.2025	55.9	19.3	10.4	20.3	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • **BLQ= below limit of quantification , LOQ= limit of quantification,** • **Environmental condition – Satisfactory & Clear.** • **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwa
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002908F
Report No.: ALPL/03062025/3-2 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126598/962
		. W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/12052025/ENV-7/10-3 & 4
		Reference to sampling plan	ANId/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 05/05/2025 to 06/05/2025 & 09.05.2025 to 10/05/2025	**Sample Inward Date**	12/05/2025
Test Started On:-	13/06/2025	**Test Completed On:-**	16/05/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each;	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	05.05.2025	59.3	24.1	13.5	22.6	BLQ (LOQ-0.5)
		09.05.2025	64.1	21.3	14.5	25.3	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • **BLQ= below limit of quantification , LOQ= limit of quantification.** • **Environmental condition – Satisfactory & Clear.** • **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chirmay Garway
Deputy Quality Manager

----End of Report----

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Test Report

ULR No.-TC129982500002909F
Report No.: ALPL/03062025/3-3 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/12052025/ENV-7/10-5 & 6
		Reference to sampling plan	ANId/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 05/05/2025 to 06/05/2025 & 09.05.2025 to 10/05/2025	Sample Inward Date	12/05/2025
Test Started On:-	13/05/2025	Test Completed On:-	16/05/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Kalesahi Village (Buffer Zone)	05.05.2025	56.4	21.3	13.4	20.4	BLQ (LOQ-0.5)
		09.05.2025	51.8	18.6	10.4	19.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwey
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002910F
Report No.: ALPL/03062025/3-4 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/12052025/ENV-7/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 05/05/2025 to 08/05/2025 & 09.05.2025 to 10/05/2025	**Sample Inward Date**	12/05/2025
Test Started On:-	13/05/2025	**Test Completed On:-**	16/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No. 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	05.05.2025	57.9	20.6	13.6	19.4	BLQ (LOQ-0.5)
		09.05.2025	60.1	22.9	12.3	21.7	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • **BLQ= below limit of quantification , LOQ= limit of quantification.** • **Environmental condition – Satisfactory & Clear.** • **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwaj
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002911F
Report No.: ALPL/03062025/3-5 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/12052025/ENV-7/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 05/05/2025 to 08/05/2025 & 09.05.2025 to 10/05/2025	**Sample Inward Date**	12/05/2025
Test Started On:-	13/05/2025	**Test Completed On:-**	16/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	05.05.2025	61.7	24.9	12.9	26.1	BLQ (LOQ-0.5)
		09.05.2025	66.2	29.7	15.3	24.8	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear.** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwady
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002912F
Report No.: ALPL/03062025/3-6 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/19052025/ENV-7/16-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/05/2025 to 13/05/2025 & 15/05/2025 to 16/05/2025	**Sample Inward Date**	19/05/2025
Test Started On:-	20/05/2025	**Test Completed On:-**	23/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	12.05.2025	56.4	20.5	10.7	19.6	BLQ (LOQ-0.5)
		15.05.2025	55.3	21.9	9.5	20.5	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwaj
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002913F
Report No.: ALPL/03062025/3-7 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/19052025/ENV-7/16-3 & 4
		Reference to sampling plan	ANId/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/05/2025 to 13/05/2025 & 15/05/2025 to 16/05/2025	**Sample Inward Date**	19/05/2025
Test Started On:-	20/05/2025	**Test Completed On:-**	23/05/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-2	Near Kalmang Village (Buffer Zone)	12.05.2025	58.3	22.1	12.3	20.7	BLQ (LOQ-0.5)
		15.05.2025	61.5	23.9	11.4	22.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002914F
Report No.: ALPL/03062025/3-8 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/19052025/ENV-7/16-5 & 6
		Reference to sampling plan	ANId/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/05/2025 to 13/05/2025 & 15/05/2025 to 16/05/2025	Sample Inward Date	19/05/2025
Test Started On:-	20/05/2025	Test Completed On:-	23/05/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
L	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Kalesahi Village (Buffer Zone)	12.05.2025	58.4	23.7	13.9	22.1	BLQ (LOQ-0.5)
		15.05.2025	53.9	19.4	10.5	21.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark 'Original Test Report' to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs; • BLQ= below limit of quantification, LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002915F
Report No.: ALPL/03062025/3-9 dated 03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/19052025/ENV-7/16-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/05/2025 to 13/05/2025 & 15/05/2025 to 16/05/2025	**Sample Inward Date**	19/05/2025
Test Started On:-	20/05/2025	**Test Completed On:-**	23/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	12.05.2025	55.6	20.4	12.9	19.8	BLQ (LOQ-0.5)
		15.05.2025	59.4	23.5	13.5	21.4	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: • Please see watermark 'Original Test Report' to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • **BLQ= below limit of quantification , LOQ= limit of quantification.** • **Environmental condition – Satisfactory & Clear.** • **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982506002916F
Report No.: ALPL/03062025/3-10 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/19052025/ENV-7/16-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 12/05/2025 to 13/05/2025 & 15/05/2025 to 16/05/2025	**Sample Inward Date**	19/05/2025
Test Started On:-	20/05/2025	**Test Completed On:-**	23/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	12.05.2025	60.7	26.8	13.4	18.3	BLQ (LOQ-0.5)
		15.05.2025	62.9	24.1	14.2	23.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark 'Original Test Report' to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • **BLQ= below limit of quantification , LOQ= limit of quantification.** • **Environmental condition – Satisfactory & Clear.** • **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06).**

Remark : - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002917F
Report No.: ALPL/03062025/3-11 dated:03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/260525/ENV-7/31-1 & 2
		Reference to sampling plan	ANId/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 19/05/2025 to 20/05/2025 & 21/05/2025 to 22/05/2025	**Sample Inward Date**	26/05/2025
Test Started On:-	27/05/2025	**Test Completed On:-**	29/05/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No. 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	19.05.2025	58.3	23.5	13.8	24.9	BLQ (LOQ-0.5)
		21.05.2025	53.9	20.6	10.7	21.6	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • **BLQ= below limit of quantification , LOQ= limit of quantification.** • **Environmental condition – Satisfactory & Clear.** • **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/6).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002918F
Report No.: ALPL/03062025/3-12 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/260525/ENV-7/31-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 19/05/2025 to 20/05/2025 & 21/05/2025 to 22/05/2025	Sample Inward Date	26/05/2025
Test Started On:-	27/05/2025	Test Completed On:-	29/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos , 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalmang Village (Buffer Zone)	19.05.2025	60.8	19.4	9.4	18.2	BLQ (LOQ-0.5)
		21.05.2025	57.6	20.1	10.6	21.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark : - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwey
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002919F
Report No.: ALPL/03062025/3-13 dated 03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/260525/ENV-7/31-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 19/05/2025 to 20/05/2025 & 21/05/2025 to 22/05/2025	Sample Inward Date	26/05/2025
Test Started On:-	27/05/2025	Test Completed On:-	29/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	19.05.2025	56.4	20.9	10.6	19.1	BLQ (LOQ-0.5)
		21.05.2025	60.9	23.4	13.5	25.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganvir
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500002920F
Report No.: ALPL/03052025/3-14 dated 03.06.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/952
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/260525/ENV-7/31-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 19/05/2025 to 20/05/2025 & 21/05/2025 to 22/05/2025	**Sample Inward Date**	26/05/2025
Test Started On:-	27/05/2025	**Test Completed On:-**	29/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each;	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	19.05.2025	62.3	22.6	13.4	24.9	BLQ (LOQ-0.5)
		21.05.2025	59.4	20.3	10.6	20.7	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002921F
Report No.: ALPL/03062025/3-15 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126595/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/260525/ENV-7/31-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 19/05/2025 to 20/05/2025 & 21/05/2025 to 22/05/2025	Sample Inward Date	26/05/2025
Test Started On:-	27/05/2025	Test Completed On:-	29/05/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each:	1No, 24hrs	6Nos, 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	19.05.2025	59.4	23.3	12.8	18.3	BLQ (LOQ-0.5)
		21.05.2025	55.9	21.6	11.3	19.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwey
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002922F
Report No.: ALPL/03062025/3-16 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020625/ENV-7/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/05/2025 to 27/05/2025 & 31/05/2025 to 01/05/2025)	Sample Inward Date	02/05/2025
Test Started On:-	02/06/2025	Test Completed On:-	03/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	26.05.2025	59.6	24.1	13.8	21.4	BLQ (LOQ-0.5)
		31.05.2025	59.6	20.6	11.6	21.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002923F
Report No.: ALPL/03062025/3-17 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020625/ENV-7/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/05/2025 to 27/05/2025& 31/05/2025 to 01/05/2025)	Sample Inward Date	02/06/2025
Test Started On:-	02/06/2025	Test Completed On:-	03/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	26.05.2025	60.1	22.8	13.1	25.8	BLQ (LOQ-0.5)
		31.05.2025	54.6	17.6	7.6	15.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwad
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002924F
Report No.: ALPL/03062025/3-18 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020625/ENV-7/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/05/2025 to 27/05/2025& 31/05/2025 to 01/05/2025)	Sample Inward Date	02/06/2025
Test Started On:-	02/06/2025	Test Completed On:-	03/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	26.05.2025	55.2	23.8	12.5	23.9	BLQ (LOQ-0.5)
		31.05.2025	56.9	16.5	8.6	16.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Gawhale
Deputy Quality Manager

----*End of Report*----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002925F
Report No.: ALPL/03062025/3-19 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020625/ENV-7/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/05/2025 to 27/05/2025& 31/05/2025 to 01/05/2025)	Sample Inward Date	02/06/2025
Test Started On:-	02/06/2025	Test Completed On:-	03/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	26.05.2025	61.9	22.7	12.9	24.1	BLQ (LOQ-0.5)
		31.05.2025	58.4	23.4	10.6	22.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark 'Original Test Report' to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500002926F
Report No.: ALPL/03062025/3-20 dated:03.06.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/982
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020625/ENV-7/10-9 & 10
		Reference to sampling plan	ANId/7.3/Mon-02/May-2025/3
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/05/2025 to 27/05/2025& 31/05/2025 to 01/05/2025)	Sample Inward Date	02/06/2025
Test Started On:-	02/06/2025	Test Completed On:-	03/06/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m³	Carbon Monoxide (as CO) mg/m³
			3Nos., 8 hrly each	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	26.05.2025	58.3	20.2	10.63	19.3	BLQ (LOQ-0.5)
		31.05.2025	60.3	19.8	9.5	18.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark 'Original Test Report' to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwaj
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500004145F
Report No.:ALPL/03072025/24-1 dated:03/07/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126595/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09062025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/06/2025 to 03/06/2025 & 06/06/2025 to 07/06/2025)	Sample Inward Date	09/06/2025
Test Started On:-	10/06/2025	Test Completed On:-	13/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	02.06.2025	64.8	25.7	10.2	17.1	BLQ (LOQ-0.5)
		06.06.2025	55.2	23.6	8.5	21.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chirmay Garway
Deputy Quality Manager

—End of Report—

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TC-12998

Test Report

ULR No.-TC129982500004146F
Report No.:ALPL/03072025/24-2 dated 03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09062025/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/06/2025 to 03/06/2025 & 06/06/2025 to 07/06/2025)	Sample Inward Date	09/06/2025
Test Started On:-	10/06/2025	Test Completed On:-	13/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No. 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	02.06.2025	59.6	27.4	9.9	21.3	BLQ (LOQ-0.5)
		06.06.2025	54.7	25.2	9.2	19.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Gahway
Deputy Quality Manager

----End of Report----

ORIGINAL REPORT

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TC-12998

Test Report

ULR No.-TC129982500004147F
Report No.:ALPL/03072025/24-3 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09062025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/06/2025 to 03/06/2025 & 06/06/2025 to 07/06/2025)	Sample Inward Date	09/06/2025
Test Started On:-	10/06/2025	Test Completed On:-	13/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	02.06.2025	50.4	21	5.3	16	BLQ (LOQ-0.5)
		06.06.2025	48.5	20.2	6.2	13.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----*End of Report*----

ORIGINAL REPORT

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TC-12998

Test Report

ULR No.-TC129982500004148F
Report No.:ALPL/03072025/24-4 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09062025/ENV-4/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/06/2025 to 03/06/2025 & 06/06/2025 to 07/06/2025)	Sample Inward Date	09/06/2025
Test Started On:-	10/06/2025	Test Completed On:-	13/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-4	Near Gandalpada Village (Buffer Zone)	02.06.2025	58.2	22.7	9.1	16.8	BLQ (LOQ-0.5)
		06.06.2025	62.5	26.5	8.4	18.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----*End of Report*----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500004149F
Report No.:ALPL/03072025/24-5 dated:03/07/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09062025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/06/2025 to 03/06/2025 & 06/06/2025 to 07/06/2025)	Sample Inward Date	09/06/2025
Test Started On:-	10/06/2025	Test Completed On:-	13/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-5	Near Malda Village (Buffer Zone)	02.06.2025	57.5	22.3	9.3	23.5	BLQ (LOQ-0.5)
		06.06.2025	55.8	21.8	7	20.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganvir
Deputy Quality Manager

----*End of Report*----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500004150F
Report No.:ALPL/03072025/24-6 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/160625/ENV-4/15-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/06/2025 to 11/06/2025 & 14/06/2025 to 15/06/2025)	Sample Inward Date	16/06/2025
Test Started On:-	17/06/2025	Test Completed On:-	20/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Gusli Village (Buffer Zone)	10.06.2025	59.6	26.8	11.2	24.8	BLQ (LOQ-0.5)
		14.06.2025	67.4	29.7	9.5	21.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

---End of Report---

ORIGINAL TEST REPORT

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004151F
Report No.:ALPL/03072025/24-7 dated:03/07/2025 **Page 1 of 1**

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/952
		. W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/160625/ENV-4/15-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/06/2025 to 11/06/2025 & 14/06/2025 to 15/06/2025)	**Sample Inward Date**	16/06/2025
Test Started On:-	17/06/2025	**Test Completed On:-**	20/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	10.06.2025	53.4	19.8	8.2	15.7	BLQ (LOQ-0.5)
		14.06.2025	59.6	22	9.9	17.1	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06).**

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganvir
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004152F
Report No.:ALPL/03072025/24-8 dated:03/07/2025 **Page 1 of 1**

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/160625/ENV-4/15-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/06/2025 to 11/06/2025 & 14/06/2025 to 15/06/2025)	**Sample Inward Date**	16/06/2025
Test Started On:-	17/06/2025	**Test Completed On:-**	20/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	10.06.2025	44.6	23.7	6.9	12.6	BLQ (LOQ-0.5)
		14.06.2025	48.8	19.7	6.5	14.9	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500004153F
Report No.:ALPL/03072025/24-9 dated:03/07/2025 **Page 1 of 1**

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/160625/ENV-4/15-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/06/2025 to 11/06/2025 & 14/06/2025 to 15/06/2025)	**Sample Inward Date**	16/06/2025
Test Started On:-	17/06/2025	**Test Completed On:-**	20/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Air				
AAQ-4	Near Gandalpada Village (Buffer Zone)	10.06.2025	53.3	21.3	8.7	16.6	BLQ (LOQ-0.5)
		14.06.2025	57.2	20.1	9.1	18.8	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES ● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500004154F
Report No.:ALPL/03072025/24-10 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126598/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/160625/ENV-4/15-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/06/2025 to 11/06/2025 & 14/06/2025 to 15/06/2025)	Sample Inward Date	16/06/2025
Test Started On:-	17/06/2025	Test Completed On:-	20/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-5	Near Malda Village (Buffer Zone)	10.06.2025	59.2	24.2	8.3	22.8	BLQ (LOQ-0.5)
		14.06.2025	64.4	27.8	10.5	19.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garkal
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500004155F
Report No.:ALPL/03072025/24-11 dated:03/07/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/230625/ENV-4/23-1 & 2
		Reference to sampling plan	ANId/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/06/2025 to 17/06/2025 & 21/06/2025 to 22/06/2025)	Sample Inward Date	23/06/2025
Test Started On:-	24/06/2025	Test Completed On:-	26/06/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	16.06.2025	62.2	24.4	8.2	17.9	BLQ (LOQ-0.5)
		21.06.2025	68.2	25.2	9.3	18.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Gaway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500004156F
Report No.:ALPL/03072025/24-12 dated:03/07/2025 **Page 1 of 1**

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/230625/ENV-4/23-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/06/2025 to 17/06/2025 & 21/06/2025 to 22/06/2025)	**Sample Inward Date**	23/06/2025
Test Started On:-	24/06/2025	**Test Completed On:-**	26/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested** : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	16.06.2025	54.5	18.5	8.4	15.6	BLQ (LOQ-0.5)
		21.06.2025	60.8	22.2	9.2	19.6	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP17.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Genway
Deputy Quality Manager

----End of Report----

ORIGINAL REPORT

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TC-12998

Test Report

ULR No.-TC129982500004157F
Report No.:ALPL/03072025/24-13 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/230625/ENV-4/23-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/06/2025 to 17/06/2025 & 21/06/2025 to 22/06/2025)	Sample Inward Date	23/06/2025
Test Started On:-	24/06/2025	Test Completed On:-	26/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	16.06.2025	41.9	17.3	6	16	BLQ (LOQ-0.5)
		21.06.2025	45.6	22.8	6.5	12.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004158F
Report No.:ALPL/03072025/24-14 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/230625/ENV-4/23-7 & 8	
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/06/2025 to 17/06/2025 & 21/06/2025 to 22/06/2025)	Sample Inward Date	23/06/2025	
Test Started On:-	24/06/2025	Test Completed On:-	26/06/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	16.06.2025	52.6	19.8	8.1	15.7	BLQ (LOQ-0.5)
		21.06.2025	54.2	21.3	10.6	18.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/66).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganjary
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500004159F
Report No.:ALPL/03072025/24-15 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/230625/ENV-4/23-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/06/2025 to 17/06/2025 & 21/06/2025 to 22/06/2025)	Sample Inward Date	23/06/2025
Test Started On:-	24/06/2025	Test Completed On:-	26/06/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Malda Village (Buffer Zone)	16.06.2025	56.6	23.5	9.8	20.1	BLQ (LOQ-0.5)
		21.06.2025	61.8	25.2	11.7	19.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Gajbhiye
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004160F
Report No.:ALPL/03072025/24-16 dated 03/07/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/952
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020725/ENV-4/10-1 & 2	
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/06/2025 to 27.06/2025 & 30/06/2025 to 01/06/2025)	Sample Inward Date	02/07/2025	
Test Started On:-	02/07/2025	Test Completed On:-	03/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	26.06.2025	58.3	20.6	10.5	16.9	BLQ (LOQ-0.5)
		30.06.2025	63.6	23.8	9.9	20.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500004161F
Report No.:ALPL/03072025/24-17 dated:03/07/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020725/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/06/2025 to 27/06/2025 & 30/06/2025 to 01/06/2025)	Sample Inward Date	02/07/2025
Test Started On:-	02/07/2025	Test Completed On:-	03/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	26.06.2025	61.7	26.6	10.6	20.7	BLQ (LOQ-0.5)
		30.06.2025	54.5	21.5	8.9	15.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification.•Environmental condition – Satisfactory & Clear. •Statement of conformity issued on the basis of decision rule as per quality procedure (QP17.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500004162F
Report No.:ALPL/03072025/24-18 dated:03/07/2025 **Page 1 of 1**

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/020726/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/06/2025 to 27/06/2025 & 30/06/2025 to 01/06/2025)	**Sample Inward Date**	02/07/2025
Test Started On:-	02/07/2025	**Test Completed On:-**	03/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	26.06.2025	51	25.5	6.9	12.4	BLQ (LOQ-0.5)
		30.06.2025	54.1	19.8	5.9	13.5	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • **BLQ= below limit of quantification , LOQ= limit of quantification.•Environmental condition – Satisfactory & Clear.•Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark : - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004163F
Report No.:ALPL/03072025/24-19 dated:03/07/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/020725/ENV-4/10-7 & 8	
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/06/2025 to 27/06/2025 & 30/06/2025 to 01/06/2025)	Sample Inward Date	02/07/2025	
Test Started On:-	02/07/2025	Test Completed On:-	03/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS 5182(Part-2)	IS 5182 (Part-6)	IS 5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	26.06.2025	58.8	25.1	11.6	21.3	BLQ (LOQ-0.5)
		30.06.2025	53.6	22.3	7.9	15.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05)

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

----*End of Report*----

ORIGINAL REPORT

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004164F
Report No.:ALPL/03072025/24-20 dated:03/07/2025 **Page 1 of 1**

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	**Ambient Air**	**Sample Inward No.**	ALPL/020725/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/June/2025-6
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26/06/2025 to 27/06/2025 & 30/06/2025 to 01/06/2025)	**Sample Inward Date**	02/07/2025
Test Started On:-	02/07/2025	**Test Completed On:-**	03/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical	**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air			
AAQ-5	Near Malda Village (Buffer Zone)	26.06.2025	67.5	26.5	10.2	17.7	BLQ (LOQ-0.5)
		30.06.2025	63.4	24.4	9.6	15.4	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Shefali Raut
Technical Manager

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500004850F
Report No.: ALPL/04082025/26-1 dated 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09072025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/07/2025 to 03/07/2025 & 04/07/2025 to 05/07/2025)	Sample Inward Date	09/07/2025
Test Started On:-	10/07/2025	Test Completed On:-	14/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos , 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	02.07.2025	59.6	21.8	10.2	16.9	BLQ (LOQ-0.5)
		04.07.2025	52.1	22.1	13.3	22.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehali Raut
Technical Manager

Authorized Signatory
Chinmay Garyali
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500004851F
Report No.: ALPL/04082025/25-2 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09072025/ENV-4/10-3 & 4	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/07/2025 to 03/07/2025 & 04/07/2025 to 05/07/2025)	Sample Inward Date	09/07/2025	
Test Started On:-	10/07/2025	Test Completed On:-	14/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	02.07.2025	58.6	21.8	12.5	21.3	BLQ (LOQ-0.5)
		04.07.2025	51.4	20.3	11.6	19.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP17.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Gatlewar
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004852F
Report No.: ALPL/04082025/28-3 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09072025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/07/2025 to 03/07/2025 & 04/07/2025 to 05/07/2025)	Sample Inward Date	09/07/2025
Test Started On:-	10/07/2025	Test Completed On:-	14/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	02.07.2025	58.2	22.7	9.1	15.2	BLQ (LOQ-0.5)
		04.07.2025	54.2	21.8	12.6	19.8	BLQ (LOQ-0.5)
-	NAAQMS Standards		100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

----*End of Report*----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004853F
Report No.: ALPL/04082025/26-4 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09072025/ENV-4/10-7 & 8	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/07/2025 to 03/07/2025 & 04/07/2025 to 05/07/2025)	Sample Inward Date	09/07/2025	
Test Started On:-	10/07/2025	Test Completed On:-	14/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	02.07.2025	50.4	22.6	14.2	19.4	BLQ (LOQ-0.5)
		04.07.2025	56.5	20.6	12.2	19.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP\7.8\05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Gadway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500004854F
Report No.: ALPL/04082025/25-5 dated. 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09072025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 02/07/2025 to 03/07/2025 & 04/07/2025 to 05/07/2025)	Sample Inward Date	09/07/2025
Test Started On:-	10/07/2025	Test Completed On:-	14/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS 5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Malda Village (Buffer Zone)	02.07.2025	57.5	22.3	10.3	19.5	BLQ (LOQ-0.5)
		04.07.2025	54.2	20.7	15.5	21.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Shehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500004855F
Report No.: ALPL/04082025/26-6 dated:04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16072025/ENV-4/10-1 & 2	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/07/2025 to 12/07/2025)	Sample Inward Date	16/07/2025	
Test Started On:-	17/07/2025	Test Completed On:-	21/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	10.07.2025	54.6	22.6	9.6	21.4	BLQ (LOQ-0.5)
		11.07.2025	59.8	21.5	14.2	23.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Gaikwad
Deputy Quality Manager

----*End of Report*----

ORIGINAL Test Report

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TC-12998

Test Report

ULR No.-TC129982500004856F
Report No.: ALPL/04082025/26-7 dated: 04/08/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16072025/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/07/2025 to 12/07/2025)	Sample Inward Date	16/07/2025
Test Started On:-	17/07/2025	Test Completed On:-	21/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-2	Near Kalamang Village (Buffer Zone)	10.07.2025	53.4	19.8	9.5	15.7	BLQ (LOQ-0.5)
		11.07.2025	59.6	22.9	11.3	19.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----*End of Report*----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500004857F
Report No.: ALPL/04082025/26-8 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16072025/ENV-4/10-5 & 6	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/07/2025 to 12/07/2025)	Sample Inward Date	16/07/2025	
Test Started On:-	17/07/2025	Test Completed On:-	21/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	10.07.2025	53.3	21.3	8.7	15.9	BLQ (LOQ-0.5)
		11.07.2025	57.2	23.6	13.3	21.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwa
Deputy Quality Manager

---*End of Report*---

ORIGINAL REPORT

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TC-12998

Test Report

ULR No.-TC129982500004858F
Report No.: ALPL/04082025/26-9 dated: 04/08/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16072025/ENV-4/10-7 & 8	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/07/2025 to 12/07/2025)	Sample Inward Date	16/07/2025	
Test Started On:-	17/07/2025	Test Completed On:-	21/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-4	Near Gandalpada Village (Buffer Zone)	10.07.2025	48.6	18.5	15.8	21.4	BLQ (LOQ-0.5)
		11.07.2025	51.3	21.8	16.2	22.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganjay
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500004859F
Report No.: ALPL/04082025/26-10 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/562
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16072025/ENV-4/10-9 & 10	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10/07/2025 to 12/07/2025)	Sample Inward Date	16/07/2025	
Test Started On:-	17/07/2025	Test Completed On:-	21/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Malda Village (Buffer Zone)	10.07.2025	56.6	23.5	13.8	24.1	BLQ (LOQ-0.5)
		11.07.2025	53.9	22.3	10.5	20.1	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganjay
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004860F
Report No.: ALPL/04082025/26-11 dated:04/08/2025 **Page 1 of 1**

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/24072025/ENV-4/30-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/07/2025 to 17/07/2025 & 21/07/2025 to 22/07/2025)	Sample Inward Date	24/07/2025
Test Started On:-	25/07/2025	Test Completed On:-	28/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	16.07.2025	60.1	23.6	8.2	16.8	BLQ (LOQ-0.5)
		21.07.2025	50.4	20.5	12.2	19.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Gadkay
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004861F
Report No.: ALPL/04082025/26-12 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/062
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/24072025/ENV-4/30-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/07/2025 to 17/07/2025 & 21/07/2025 to 22/07/2025)	Sample Inward Date	24/07/2025
Test Started On:-	25/07/2025	Test Completed On:-	28/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	16.07.2025	54.5	20.9	8.4	15.6	BLQ (LOQ-0.5)
		21.07.2025	55.2	21.2	14.2	21.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Gadway
Deputy Quality Manager

---End of Report---

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004862F
Report No.: ALPL/04082025/26-13 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126598/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/24072025/ENV-4/30-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/07/2025 to 17/07/2025 & 21/07/2025 to 22/07/2025)	Sample Inward Date	24/07/2025
Test Started On:-	25/07/2025	Test Completed On:-	28/07/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
-	Test Method		IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-3	Near Katesahi Village (Buffer Zone)	16.07.2025	52.6	20.4	8.1	16.8	BLQ (LOQ-0.5)
		21.07.2025	59.9	21.8	10.6	20.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500004863F
Report No.: ALPL/04082025/26-14 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/562
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/24072025/ENV-4/30-7 & 8	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/07/2025 to 17/07/2025 & 21/07/2025 to 22/07/2025)	Sample Inward Date	24/07/2025	
Test Started On:-	25/07/2025	Test Completed On:-	28/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
L	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-4	Near Gandalpada Village (Buffer Zone)	16.07.2025	60.6	24.8	13.3	23.2	BLQ (LOQ-0.5)
		21.07.2025	54.7	23.4	10.5	14.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Sarwate
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004864F
Report No.: ALPL/04082025/26-15 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126696/962
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/24072025/ENV-4/30-9 & 10	
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16/07/2025 to 17/07/2025 & 21/07/2025 to 22/07/2025)	Sample Inward Date	24/07/2025	
Test Started On:-	25/07/2025	Test Completed On:-	28/07/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Maida Village (Buffer Zone)	16.07.2025	58.4	21.3	8.8	17.2	BLQ (LOQ-0.5)
		21.07.2025	53.1	24.1	11.7	19.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganjay
Deputy Quality Manager

----*End of Report*----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500004865F
Report No.: ALPL/04082025/26-16 dated:04/08/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/062
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02082025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 25/07/2025 to 26/07/2025 & 30/07/2025 to 31/07/2025)	Sample Inward Date	02/08/2025
Test Started On:-	02/08/2025	Test Completed On:-	04/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	25.07.2025	53.4	20.6	10.5	20.4	BLQ (LOQ-0.5)
		30.07.2025	59.2	21.5	16.2	22.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500004866F
Report No.: ALPL/04082025/26-17 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02082025/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 25/07/2025 to 26/07/2025 & 30/07/2025 to 31/07/2025)	Sample Inward Date	02/08/2025
Test Started On:-	02/08/2025	Test Completed On:-	04/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	25.07.2025	54.2	19.8	13.2	20.5	BLQ (LOQ-0.5)
		30.07.2025	58.7	21.5	11.9	22.5	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganjay
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500004867F
Report No.: ALPL/04082025/26-18 dated: 04/08/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02082025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 28/07/2025 to 29/07/2025 & 30/07/2025 to 31/07/2025)	Sample Inward Date	02/08/2025
Test Started On:-	02/08/2025	Test Completed On:-	04/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-3	Near Katesahi Village (Buffer Zone)	28.07.2025	53.1	19.8	12.5	21.3	BLQ (LOQ-0.5)
		30.07.2025	53.6	22.3	13.5	22.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganjay
Deputy Quality Manager

---End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500004868F
Report No.: ALPL/04082025/26-19 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02082025/ENV-4/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 28/07/2025 to 29/07/2025 & 30/07/2025 to 31/07/2025)	Sample Inward Date	02/08/2025
Test Started On:-	02/08/2025	Test Completed On:-	04/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-4	Near Gandalpada Village (Buffer Zone)	28.07.2025	58.3	22.4	16.3	25.1	BLQ (LOQ-0.5)
		30.07.2025	53.8	25.1	11.2	21.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwad
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500004869F
Report No.: ALPL/04082025/26-20 dated: 04/08/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/01082025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/July-2025/7
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 28/07/2025 to 29/07/2025 & 30/07/2025 to 31/07/2025)	Sample Inward Date	01/08/2025
Test Started On:-	01/08/2025	Test Completed On:-	04/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
	Test Method		IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-5	Near Maida Village (Buffer Zone)	28.07.2025	57.4	20.1	12.5	20.5	BLQ (LOQ-0.5)
		30.07.2025	56.9	24.4	12.3	19.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwar
Deputy Quality Manager

---End of Report---

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005198F
Report No.: ALPL/03092025/08-1 dated:03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/12082025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.08.2025 to 02.08.2025 & 07.08.2025 to 08.08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	01.08.2025	53.9	23.8	11.7	21.4	BLQ (LOQ-0.5)
		07.08.2025	49.3	18.3	9.3	18.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/T.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chirodip Ganguly
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005199F
Report No.: ALPL/03092025/08-2 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/12082025/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.08.2025 to 02.08.2025 & 07.08.2025 to 08.08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No. 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:6182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	01.08.2025	61.8	27.4	12.9	21.8	BLQ (LOQ-0.5)
		07.08.2025	58.3	24.9	11.6	18.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.** ●**Environmental condition – Satisfactory & Clear.** ●**Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005200F
Report No.: ALPL/03092025/08-3 dated: 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/12082025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.08.2025 to 02.08.2025 & 07.08.2025 to 08.08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	01.08.2025	62.6	26.7	13.9	24.8	BLQ (LOQ-0.5)
		07.08.2025	58.3	21.6	9.3	18.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification ●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500005201F
Report No.: ALPL/03092025/08-4 dated: 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/12082025/ENV-4/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.08.2025 to 02.08.2025 & 07.08.2025 to 08.08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-4	Near Gandalpada Village (Buffer Zone)	01.08.2025	57.6	21.6	12.9	18.4	BLQ (LOQ-0.5)
		07.08.2025	61.7	23.8	14.6	23.8	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chirmay Gelway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005202F
Report No.: ALPL/03092025/08-5 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/12082025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.08.2025 to 02.08.2025 & 07.08.2025 to 08.08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Maida Village (Buffer Zone)	01.08.2025	52.8	18.3	8.7	18.6	BLQ (LOQ-0.5)
		07.08.2025	58.2	21.4	11.3	23.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark:- All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005203F
Report No.: ALPL/03092025/08-6 dated 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/19082025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 11.08.2025 to 12.08.2025 & 16.08.2025 to 17 .08.2025)	Sample Inward Date	19/08/2025
Test Started On:-	20/08/2025	Test Completed On:-	23/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	11.08.2025	52.8	21.4	12.9	23.8	BLQ (LOQ-0.5)
		16.08.2025	51.6	19.3	11.4	21.1	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005204F
Report No.: ALPL/03092025/08-7 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/19082025/ENV-4/10-3 & 4	
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 11.08.2025 to 12.08.2025 & 16.08.2025 to 17 .08.2025)	Sample Inward Date	12/08/2025	
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	11.08.2025	62.7	19.2	9.1	17.6	BLQ (LOQ-0.5)
		16.08.2025	56.1	18.4	8.7	17.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

----End of Report----

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005205F
Report No.: ALPL/03092025/08-6 dated: 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/19082025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 11.08.2025 to 12.08.2025 & 16.08.2025 to 17 .08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	11.08.2025	52.7	19.3	8.4	16.1	BLQ (LOQ-0.5)
		16.08.2025	47.6	18.7	9.1	18.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005206F
Report No.: ALPL/03092025/08-9 dated: 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/19082025/ENV-4/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 11.08.2025 to 12.08.2025 & 16.08.2025 to 17 .08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	11.08.2025	56.3	19.2	9.1	17.3	BLQ (LOQ-0.5)
		16.08.2025	54.6	18.6	8.4	16.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.:TC129982500005207F
Report No.: ALPL/03092025/08-10 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/19082025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 11.08.2025 to 12.08.2025 & 16.08.2025 to 17 .08.2025)	Sample Inward Date	12/08/2025
Test Started On:-	13/08/2025	Test Completed On:-	18/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
-	Test Method		IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-5	Near Malda Village (Buffer Zone)	11.08.2025	49.3	16.1	9.1	17.8	BLQ (LOQ-0.5)
		16.08.2025	46.7	18.3	8.7	16.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

---End of Report---

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005208F
Report No.: ALPL/03092025/08-11 dated:03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/25082025/ENV-4/28-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 18.08.2025 to 19.08.2025 & 21.08.2025 to 22.08.2025)	Sample Inward Date	25/08/2025
Test Started On:-	26/08/2025	Test Completed On:-	29/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
-			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS 5182(Part-2)	IS 5182 (Part-6)	IS 5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	18.08.2025	48.3	17.6	9.3	18.3	BLQ (LOQ-0.5)
		21.08.2025	56.7	24.9	12.8	23.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

---*End of Report*---

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TC-12998

Test Report

ULR No.-TC129982500006209F
Report No.: ALPL/03092025/08-12 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/25082025/ENV-4/28-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 18.08.2025 to 19.08.2025 & 21.08.2025 to 22.08.2025)	Sample Inward Date	25/08/2025
Test Started On:-	26/08/2025	Test Completed On:-	29/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
-			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-2	Near Kalamang Village (Buffer Zone)	18.08.2025	61.9	23.8	11.4	18.1	BLQ (LOQ-0.5)
		21.08.2025	58.3	21.7	12.9	16.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganjay
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500005210F
Report No.: ALPL/03092025/08-13 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/25082025/ENV-4/28-5 & 6
		Reference to sampling plan	ANId/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 18.08.2025 to 19.08.2025 & 21.08.2025 to 22.08.2025)	Sample Inward Date	25/08/2025
Test Started On:-	26/08/2025	Test Completed On:-	29/08/2025
Sampling Method	ANId/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS 5182(Part-2)	IS 5182 (Part-6)	IS 5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Kateshi Village (Buffer Zone)	18.08.2025	52.8	16.9	11.3	23.8	BLQ (LOQ-0.5)
		21.08.2025	46.1	17.2	9.8	18.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005211F
Report No.: ALPL/03092025/08-14 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/25082025/ENV-4/28-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 18.08.2025 to 19.08.2025 & 21.08.2025 to 22.08.2025)	Sample Inward Date	25/08/2025
Test Started On:-	26/08/2025	Test Completed On:-	29/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	18.08.2025	62.8	23.4	12.6	21.9	BLQ (LOQ-0.5)
		21.08.2025	58.3	21.3	11.4	18.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500005212F
Report No.: ALPL/03092025/08-15 dated: 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/25082025/ENV-4/28-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 18.08.2025 to 19.08.2025 & 21.08.2025 to 22.08.2025)	Sample Inward Date	25/08/2025
Test Started On:-	26/08/2025	Test Completed On:-	29/08/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Malda Village (Buffer Zone)	18.08.2025	56.2	24.9	13.8	21.7	BLQ (LOQ-0.5)
		21.08.2025	48.6	18.1	9.3	17.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500005213F
Report No.: ALPL/03092025/08-16 dated:03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02092025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 25.08.2025 to 26.08.2025 & 28.08.2025 to 29.08.2025)	Sample Inward Date	02/09/2025
Test Started On:-	02/09/2025	Test Completed On:-	03/09/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	25.08.2025	54.1	21.3	11.4	19.2	BLQ (LOQ-0.5)
		28.08.2025	48.3	16.4	7.6	15.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Shefali Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005214F
Report No.: ALPL/03092025/08-17 dated: 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/952
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02092025/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 25.08.2025 to 26.08.2025 & 28.08.2025 to 29.08.2025)	Sample Inward Date	02/09/2025
Test Started On:-	02/09/2025	Test Completed On:-	03/09/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS 5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	25.08.2025	54.7	21.6	9.3	16.8	BLQ (LOQ-0.5)
		28.08.2025	48.3	16.4	7.6	15.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chirmay Gehway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005215F
Report No.: ALPL/03092025/08-18 dated: 03/09/2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02092025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by -	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Penod 25.08.2025 to 26.08.2025 & 28.08.2025 to 29.08.2025)	Sample Inward Date	02/09/2025
Test Started On:-	02/09/2025	Test Completed On:-	03/09/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	25.08.2025	51.9	21.6	11.7	21.4	BLQ (LOQ-0.5)
		28.08.2025	48.3	16.9	9.1	17.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005216F
Report No.: ALPL/03092025/08-19 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02092025/ENV-4/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 25.08.2025 to 26.08.2025 & 28.08.2025 to 29.08.2025)	Sample Inward Date	02/09/2025
Test Started On:-	02/09/2025	Test Completed On:-	03/09/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No. 24hrs	1No. 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	25.08.2025	61.7	19.6	9.3	19.1	BLQ (LOQ-0.5)
		28.08.2025	57.3	23.8	11.6	24.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005217F
Report No.: ALPL/03092025/08-20 dated: 03/09/2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/02092025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/August-2025/8
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 25.08.2025 to 26.08.2025 & 28.08.2025 to 29.08.2025)	Sample Inward Date	02/09/2025
Test Started On:-	02/09/2025	Test Completed On:-	03/09/2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS 5182(Part-2)	IS:5182 (Part-6)	IS 5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-5	Near Malda Village (Buffer Zone)	25.08.2025	51.7	21.6	11.4	19.1	BLQ (LOQ-0.5)
		28.08.2025	53.1	19.7	9.7	17.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification ●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05)

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005784F
Report No.: ALPL/03102025/07-1 dated:03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09092025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.09.2025 to 02.09.2025 & 06.09.2025 TO 07.09.2025)	Sample Inward Date	09.09.2025
Test Started On:-	10.09.2025	Test Completed On:-	13.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	01.09.2025	52.7	19.3	8.7	16.2	BLQ (LOQ-0.5)
		06.09.2025	48.2	16.9	7.3	17.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005785F
Report No.: ALPL/03102025/07-2 dated: 03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09092025/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.09.2025 to 02.09.2025 & 06.09.2025 TO 07.09.2025)	Sample Inward Date	09.09.2025
Test Started On:-	10.09.2025	Test Completed On:-	13.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
..	Test Method		IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	01.09.2025	54.9	19.3	11.2	18.7	BLQ (LOQ-0.5)
		06.09.2025	57.2	24.7	9.3	19.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500005786F
Report No.: ALPL/03102025/07-3 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09092025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.09.2025 to 02.09.2025 & 06.09.2025 TO 07.09.2025)	Sample Inward Date	09.09.2025
Test Started On:-	10.09.2025	Test Completed On:-	13.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos. 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	01.09.2025	54.9	21.6	9.3	17.3	BLQ (LOQ-0.5)
		06.09.2025	47.6	17.3	8.4	16.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500005787F
Report No.: ALPL/03102025/07-4 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09092025/ENV-4/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.09.2025 to 02.09.2025 & 06.09.2025 TO 07.09.2025)	Sample Inward Date	09.09.2025
Test Started On:-	10.09.2025	Test Completed On:-	13.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-4	Near Gandalpada Village (Buffer Zone)	01.09.2025	52.8	18.1	9.3	17.1	BLQ (LOQ-0.5)
		06.09.2025	48.1	16.7	7.6	16.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005788F
Report No.: ALPL/03102025/07-5 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/09092025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 01.09.2025 to 02.09.2025 & 06.09.2025 TO 07.09.2025)	Sample Inward Date	09.09.2025
Test Started On:-	10.09.2025	Test Completed On:-	13.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Maida Village (Buffer Zone)	01.09.2025	48.2	15.3	11.3	16.2	BLQ (LOQ-0.5)
		06.09.2025	53.4	15.7	9.8	16.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----*End of Report*----

ORIGINAL TEST REPORT

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005789F
Report No.: ALPL/03102025/07-6 dated 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126696/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16092025/ENV-4/10-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10.09.2025 to 11.09.2025 & 12.09.2025 TO 13.09.2025)	Sample Inward Date	16.09.2025
Test Started On:-	17.09.2025	Test Completed On:-	20.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos. 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS 5182 (Part-10)
L	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	10.09.2025	54.7	21.6	9.3	18.3	BLQ (LOQ-0.5)
		12.09.2025	48.3	18.2	7.9	16.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be related to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Gatway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005790F
Report No.: ALPL/03102025/07-7 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16092025/ENV-4/10-3 & 4
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10.09.2025 to 11.09.2025 & 12.09.2025 TO 13.09.2025)	Sample Inward Date	16.09.2025
Test Started On:-	17.09.2025	Test Completed On:-	20.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	10.09.2025	51.8	23.6	10.3	16.9	BLQ (LOQ-0.5)
		12.09.2025	53.7	19.2	9.7	17.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Shefal Raut
Technical Manager

Authorized Signatory

Chinmay Barway
Deputy Quality Manager

---End of Report---

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005791F
Report No.: ALPL/03102025/07-8 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126595/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16092025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10.09.2025 to 11.09.2025 & 12.09.2025 TO 13.09.2025)	Sample Inward Date	16.09.2025
Test Started On:-	17.09.2025	Test Completed On:-	20.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	10.09.2025	56.1	23.8	14.7	16.9	BLQ (LOQ-0.5)
		12.09.2025	52.8	21.6	12.9	18.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005792F
Report No.: ALPL/03102025/07-9 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16092025/ENV-4/10-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10.09.2025 to 11.09.2025 & 12.09.2025 TO 13.09.2025)	Sample Inward Date	16.09.2025
Test Started On:-	17.09.2025	Test Completed On:-	20.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-4	Near Gandalpada Village (Buffer Zone)	10.09.2025	56.4	21.6	11.3	21.8	BLQ (LOQ-0.5)
		12.09.2025	47.3	18.3	9.1	18.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:• Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • BLQ= below limit of quantification , LOQ= limit of quantification.•Environmental condition – Satisfactory & Clear.•Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----*End of Report*----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005794F
Report No.: ALPL/03102025/07-11 dated:03.10.2025

Name and Address of Industry:-	**M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)**	**W. O. No.**	4700126596/062
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	**Sample Inward No.**	ALPL/23092025/ENV-4/26-1 & 2
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16.09.2025 to 17.09.2025 & 19.09.2025 TO 20.09.2025)	**Sample Inward Date**	23.09.2025
Test Started On:-	24.09.2025	**Test Completed On:-**	27.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	**Discipline:** Chemical		**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	16.09.2025	51.8	23.7	11.4	21.9	BLQ (LOQ-0.5)
		19.09.2025	53.1	24.6	9.2	18.2	BLQ (LOQ-0.5)
NAAQMS Standards			**100 (24 hrs)**	**60 (24 hrs)**	**80 (24 hrs)**	**80 (24 hrs)**	**2.0 (8 hrs)**

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● **BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).**

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Shefali Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

—End of Report—

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TC-12998

Test Report

ULR No.-TC129982500005793F
Report No.: ALPL/03102025/07-10 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/16092025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 10.09.2025 to 11.09.2025 & 12.09.2025 TO 13.09.2025)	Sample Inward Date	16.09.2025
Test Started On:-	17.09.2025	Test Completed On:-	20.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Malda Village (Buffer Zone)	10.09.2025	52.7	21.7	14.2	26.1	BLQ (LOQ-0.5)
		12.09.2025	58.3	27.1	13.9	24.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

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Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

----*End of Report*----

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TC-12998

Test Report

ULR No.-TC129982500005795F
Report No.: ALPL/03102025/07-12 dated: 03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126696/962
			. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/23092025/ENV-4/28-3 & 4	
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16.09.2025 to 17.09.2025 & 19.09.2025 TO 20.09.2025)	Sample Inward Date	23.09.2025	
Test Started On:-	24.09.2025	Test Completed On:-	27.09.2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	16.09.2025	48.2	17.3	9.1	18.4	BLQ (LOQ-0.5)
		19.09.2025	54.7	21.6	8.6	16.9	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganeay
Deputy Quality Manager

----*End of Report*----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500005796F
Report No.: ALPL/03102025/07-13 dated: 03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/23092025/ENV-4/28-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16.09.2025 to 17.09.2025 & 19.09.2025 TO 20.09.2025)	Sample Inward Date	23.09.2025
Test Started On:-	24.09.2025	Test Completed On:-	27.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-3	Near Katesahi Village (Buffer Zone)	16.09.2025	62.7	24.1	11.6	21.9	BLQ (LOQ-0.5)
		19.09.2025	58.3	19.6	9.4	16.2	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Sneha Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----*End of Report*----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005797F
Report No.: ALPL/03102025/07-14 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/23092025/ENV-4/28-7 & 8
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16.09.2025 to 17.09.2025 & 19.09.2025 TO 20.09.2025)	Sample Inward Date	23.09.2025
Test Started On:-	24.09.2025	Test Completed On:-	27.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-4	Near Gandalpada Village (Buffer Zone)	16.09.2025	53.7	19.4	11.7	21.4	BLQ (LOQ-0.5)
		19.09.2025	56.1	21.7	12.8	19.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005798F
Report No.: ALPL/03102025/07-15 dated: 03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/23092025/ENV-4/28-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 16.09.2025 to 17.09.2025 & 19.09.2025 TO 20.09.2025)	Sample Inward Date	23.09.2025
Test Started On:-	24.09.2025	Test Completed On:-	27.09.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Malda Village (Buffer Zone)	16.09.2025	51.6	18.3	9.7	18.3	BLQ (LOQ-0.5)
		19.09.2025	48.3	16.9	8.2	16.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwaj
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005799F
Report No.: ALPL/03102025/07-16 dated:03.10.2025

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			. W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/03102025/ENV-4/10-1 & 2	
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26.09.2025 to 27.09.2025 & 29.09.2025 to 30.09.2025)	Sample Inward Date	03.10.2025	
Test Started On:-	03.10.2025	Test Completed On:-	03.10.2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical		Group: Atmospheric Pollution		Material or Product tested : Ambient Air		
AAQ-1	Near Guali Village (Buffer Zone)	26.09.2025	54.8	21.4	8.4	17.1	BLQ (LOQ-0.5)
		29.09.2025	56.2	26.1	12.8	23.6	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification,●Environmental condition – Satisfactory& Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Barway
Deputy Quality Manager

---*End of Report*---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005800F
Report No.: ALPL/03102025/07-17 dated: 03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/03102025/ENV-4/10-3 & 4	
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26.09.2025 to 27.09.2025 & 29.09.2025 to 30.09.2025)	Sample Inward Date	03.10.2025	
Test Started On:-	03.10.2025	Test Completed On:-	03.10.2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-2	Near Kalamang Village (Buffer Zone)	26.09.2025	53.4	17.2	8.1	18.3	BLQ (LOQ-0.5)
		29.09.2025	47.3	16.4	6.8	16.1	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005801F
Report No.: ALPL/03102025/07-18 dated: 03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/03102025/ENV-4/10-5 & 6
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26.09.2025 to 27.09.2025 & 29.09.2025 to 30.09.2025)	Sample Inward Date	03.10.2025
Test Started On:-	03.10.2025	Test Completed On:-	03.10.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
L	Discipline: Chemical	Group: Atmospheric Pollution		Material or Product tested : Ambient Air			
AAQ-3	Near Katesahi Village (Buffer Zone)	26.09.2025	61.6	21.7	11.9	17.3	BLQ (LOQ-0.5)
		29.09.2025	56.2	19.2	8.4	16.7	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (DP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500005802F
Report No.: ALPL/03102025/07-19 dated: 03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)		W. O. No.	4700126596/962
			, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/03102026/ENV-4/10-7 & 8	
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9	
		Transport Condition	Carry in ice box at 4 °C	
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26.09.2025 to 27.09.2025 & 29.09.2025 to 30.09.2025)	Sample Inward Date	03.10.2025	
Test Started On:-	03.10.2025	Test Completed On:-	03.10.2025	
Sampling Method	ANtd/7.2/MON-01			

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS:5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-4	Near Gandalpada Village (Buffer Zone)	26.09.2025	47.3	16.2	7.6	16.1	BLQ (LOQ-0.5)
		29.09.2025	51.9	18.6	8.2	17.4	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/04).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500005803F
Report No.: ALPL/03102025/07-20 dated: 03.10.2025 Page 1 of 1

Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA STEEL LIMITED)	W. O. No.	4700126596/962
		, W. O. date:	30.05.2024
Sample Description/ Type	Ambient Air	Sample Inward No.	ALPL/03102025/ENV-4/10-9 & 10
		Reference to sampling plan	ANtd/7.3/Mon-02/September-2025/9
		Transport Condition	Carry in ice box at 4 °C
Sampled by	Anacon Representative Mr. Satyabrata Dhal (Sampling duration Period 26.09.2025 to 27.09.2025 & 29.09.2025 to 30.09.2025)	Sample Inward Date	03.10.2025
Test Started On:-	03.10.2025	Test Completed On:-	03.10.2025
Sampling Method	ANtd/7.2/MON-01		

Sr. No.	LOCATION	Date of sampling	Particulate Matter (PM10) µg/m³	Particulate Matter (PM2.5) µg/m³	Sulphur dioxide µg/m³	Oxides of Nitrogen µg/m3	Carbon Monoxide (as CO) mg/m³
			1No, 24hrs	1No, 24hrs	6Nos, 4 hrly each	6Nos, 4 hrly each	3Nos., 8 hrly each
Test Method			IS 5182 (Part 23)	USEPA-40(Part 50)	IS:5182(Part-2)	IS:5182 (Part-6)	IS.5182 (Part-10)
I.	Discipline: Chemical	Group: Atmospheric Pollution	Material or Product tested : Ambient Air				
AAQ-5	Near Malda Village (Buffer Zone)	26.09.2025	53.9	21.6	9.1	18.1	BLQ (LOQ-0.5)
		29.09.2025	56.2	23.8	11.6	21.3	BLQ (LOQ-0.5)
NAAQMS Standards			100 (24 hrs)	60 (24 hrs)	80 (24 hrs)	80 (24 hrs)	2.0 (8 hrs)

NOTES:● Please see watermark "Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BLQ= below limit of quantification , LOQ= limit of quantification.●Environmental condition – Satisfactory & Clear.●Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per NAAQMS Standards.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chirmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TATA

To,
Head of Office,
Central Ground Water Board,
South Eastern Region, Bhujal Bhawan,
Khandagiri Square, Nh-5
Bhubaneshwar, Khordha, Odisha - 751030

KGP/KAL/07/FY'26

09th Jun'2025

Sub: Submission of Ground Water level data for the period of April-2025 to June-2025

Ref: - CGWA/NOC/MIN/REN/1/2024/10145 dated 19.02.2025
EC File No-55807/89-MINB1/06-2022, dated 18.10.2022.

Dear Sir,

In compliance with Condition No. 5 of the No Objection Certificate (NoC) for groundwater abstraction, and standard conditions related to water quality monitoring and preservation we are hereby submitting the groundwater level monitoring report in buffer zone for the period April-2025 to June-2025 w.r.t Kalamang West (Northern Part) Iron Ore Mines.

We would like to bring to your notice that mining operation at Kalamang mine is yet to commence and we will install the piezometer in core zone after start of mining operation. The details regarding the same will be communicated to your good office within one week of installation in future.

Please find the ground water level data for the buffer zone in Annexure-1.

Thanking You,

Yours Faithfully,

Dipak Behera
Chief (Kalamang & Gandhalpada Project)

Encl: - As above

Copy to:

1. Member Secretary, Central Ground Water Authority, CSMRS Campus, Olo Palme Marg, Hauz Khas, New Delhi-110016.
2. Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar,Unit – VIII, Bhubaneswar – 751012, Odisha.

TATA STEEL LIMITED
Mines Division Joda Keonjhar Odisha 758 034 India
Tel 91 7440037036
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

ANNEXURE-1

Ground Water Level Monitoring Report					
Site Name- Buffer Zones					
For April-2025 to June-2025					
Sr.No	Monitoring Location	Structure Type	April-2025	May-2025	June-2025
			Water level (mbgl)		
1	Kalamang	Dug Well	9.55	10.5	8.65
2	Katesahi	Dug Well	3.51	4.6	2.61
3	Gandhalpada	Dug Well	13.03	14.25	9.94
4	TSF Guali Office	Dug Well	7.68	6.95	4.59
5	Malda	Dug Well	5.6	6.19	5.1

To,
Head of Office,
Central Ground Water Board,
South Eastern Region, Bhujal Bhawan,
Khandagiri Square, Nh-5
Bhubaneshwar, Khordha, Odisha - 751030

KGP/KAL/29/FY'26
13th Oct'2025

Sub: Submission of Ground Water level data for the period of July-2025 to September-2025

Ref: - CGWA/NOC/MIN/REN/1/2024/10145 dated 19.02.2025
EC File No-55807/89-MINB1/06-2022, dated 18.10.2022.
CTO Order No. 15947/IND-I-CON-7002; dated 25.08.2025

Dear Sir,

In compliance with the conditions stipulated in the No Objection Certificate (NoC) for groundwater abstraction, and in accordance with the specific conditions outlined in the Environmental Clearance (EC) and Consent to Operate (CTO) regarding water quality monitoring and preservation, we hereby submit the Groundwater Level Monitoring & Analysis Report for the buffer zone of Kalamang West (Northern Part) Iron Ore Mines for the period July 2025 to September 2025.

We would like to respectfully bring to your attention that mining operations at the Kalamang mine are yet to commence. Accordingly, the installation of piezometers in the core zone is planned to be undertaken post commencement of mining activities.

We assure you that the details of piezometer installation, including location and specifications, will be duly communicated to your esteemed office within one week of installation in the future.

Please find the ground water level data for the buffer zone in **Annexure-1** & Water Quality Analysis report as **Annexure-2.**

Thanking You,
Yours Faithfully,



Dipak Behera
Chief (Kalamang & Gandhalpada Project)

Encl: - As above

Copy to:

1. Member Secretary, Central Ground Water Authority, CSMRS Campus, O/o Palme Marg,Hauz Khas, New Delhi-110016.
2. Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar,Unit – VIII, Bhubaneswar – 751012, Odisha.
3. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office A/3, Chandersekharpur, Bhubaneswar – 751023

TATA STEEL LIMITED
Mines Division Joda Keonjhar Odisha 758 034 India
Tel 91 7440037036
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

ANNEXURE-1

Ground Water Level Monitoring Report					
Site Name- Buffer Zones					
For July-2025 to Sep-2025					
Sr. No	**Monitoring Location**	**Structure Type**	**July-2025**	**Aug-2025**	**Sep-2025**
			Water level (mbgl)		
1	Kalamang	Dug Well	3.25	2.45	3.48
2	Katesahi	Dug Well	1.32	1.4	1.51
3	Gandhalpada	Dug Well	9.02	2.08	2.68
4	TSF Guali Office	Dug Well	0.15	0.55	0.35
5	Malda	Dug Well	0.79	0.8	0.81

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004870F
Test Report No. : ALPL/04082025/26-30 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-22	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	178.56
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	30.59
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	4.28
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	10.6
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.25
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	6.98
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	358
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	148

☐ **Please refer last Page for Note and Remarks.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Gadway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500004870F

Test Report No. : ALPL/04082025/26-30 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-22	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	Discipline : Chemical	Group : Residues in water				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.08
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)
IV	Discipline : Chemical		Group : Residues in water			
34	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

□ Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanwani
Deputy Technical Manager

Authorized Signatory

Chinmay Gerwey
Deputy Quality Manager

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

Test Report

ULR No.-TC129982500004870F

Test Report No. : ALPL/04082025/26-30 dated 04/08/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-22	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

☐ **Please refer last Page for Note and Remarks.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Ganwat
Deputy Quality Manager

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

Test Report

ULR No.-TC129982500004870F

Test Report No. : ALPL/04082025/26-30 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-22	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANto/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p`-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p`-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p`- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p`- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ< below limit of quantification, LOQ> limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dhenrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

-----End of Report-----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004871F

Test Report No. : ALPL/04082025/26-31 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-23	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	164.28
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	28.69
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	38.6
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	10.6
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.65
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	8.26
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	248
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	168

□ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Gaiwad
Deputy Quality Manager

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Test Report

ULR No.-TC129982500004871F

Test Report No. : ALPL/04082025/26-31 dated 04/08/2025 Page 2 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-23	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.12
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)
IV	**Discipline : Chemical**	**Group : Residues in water**				
34	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

☐ **Please refer last Page for Note and Remarks.**

Verified By

Dhanashree Hiwarj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gadway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500004871F

Test Report No. : ALPL/04082025/26-31 dated 04/08/2025 Page 3 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-23	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p´-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p´-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

☐ **Please refer last Page for Note and Remarks.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garwaj
Deputy Quality Manager

Anacon Laboratories Pvt. Ltd. Nagpur Lab

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004871F

Test Report No. : ALPL/04082025/26-31 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-23	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method** ● **BLQ= below limit of quantification, LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear.** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gerway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004872F

Test Report No. : ALPL/04082025/26-32 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-24	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	178.25
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	25.98
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	34.19
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	11.49
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.35
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	5.98
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	405
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	128

□ **Please refer last Page for Note and Remarks.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500004872F

Test Report No. : ALPL/04082025/26-32 dated 04/08/2025 Page 2 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-24	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.11
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)
IV	**Discipline : Chemical**	**Group : Residues in water**				
34	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kamlesh Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

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Test Report

ULR No.-TC129982500004872F

Test Report No. : ALPL/04082025/26-32 dated 04/08/2025 Page 3 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-24	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANto/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

☐ **Please refer last Page for Note and Remarks.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500004872F

Test Report No. : ALPL/04082025/26-32 dated 04/08/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-24	**Analysis Start**	25/07/2025
	Inward Date	24/07/2025	**Analysis End**	01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date**	04/08/2025

Sample Description	**Purpose of Analysis**	**Sample Condition**	**Quantity Received**
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	**Sampling Date**	**Sampling Time**	**Sampling Location**
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • #Permissible limit in absence of an alternate source for drinking water. • 'mg/l' is equivalent to 'ppm'. • 'µg/l' is equivalent to 'ppb'. • **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method • BLQ= below limit of quantification, LOQ= limit of quantification. • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). • pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Chanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Ganvay
Deputy Quality Manager

-----End of Report-----

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TC-12998

Test Report

ULR No.-TC129982500004873F

Test Report No. : ALPL/04082025/26-33 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-25	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	180.25
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 65)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	30.69
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	35.14
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	12.96
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.58
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	8.54
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	369
18	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	126

□ **Please refer last Page for Note and Remarks.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Prerita Manchewar
Dy. Technical Manager

Chinmay Gedwar
Deputy Quality Manager

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	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.14
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)
IV	**Discipline : Chemical**		**Group : Residues in water**			
34	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

□ **Please refer last Page for Note and Remarks.**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

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Test Report

ULR No.-TC129982500004873F

Test Report No. : ALPL/04082025/26-33 dated 04/08/2025 Page 3 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-25	**Analysis Start** 25/07/2025
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Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

☐ **Please refer last Page for Note and Remarks.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004873F

Test Report No. : ALPL/04082025/26-33 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-25	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs ● Liability of Anacon Labs is limited to invoiced amount only ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm' ● 'µg/l' is equivalent to 'ppb' ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

-----End of Report-----

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TC-12998

Test Report

ULR No.-TC129982500004874F

Test Report No. : ALPL/04082025/26-34 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-26	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126595/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological**		**Group : Water**			
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical**		**Group : Water**			
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	172.59
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	38.54
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	25.89
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	5.4
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.89
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	8.01
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	324
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	164

□ **Please refer last Page for Note and Remarks.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500004874F

Test Report No. : ALPL/04082025/26-34 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-26	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.10
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	ANtr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)
IV	**Discipline : Chemical**		**Group : Residues in water**			
34	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)

□ **Please refer last Page for Note and Remarks.**

Verified By

Dhanashree Hiwarj
Sr. Technical Assistant

Kashish Chamrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gawde
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500004874F

Test Report No. : ALPL/04082025/26-34 dated 04/08/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-26	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**			**Group : Residues in water**		
35	**Pesticide Residues Organochlorine**					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

□ **Please refer last Page for Note and Remarks.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004874F

Test Report No. : ALPL/04082025/26-34 dated 04/08/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/24072025/W-4/30-26	**Analysis Start** 25/07/2025
	Inward Date	24/07/2025	**Analysis End** 01/08/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 04/08/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtr/7.2/MON-01	21/07/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs ● Liability of Anacon Labs is limited to invoiced amount only ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● mg/l is equivalent to 'ppm' ● µg/l is equivalent to 'ppb' ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gadkay
Deputy Quality Manager

-----End of Report-----

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TC-12998

Test Report

ULR No.-TC129982500005218F
Test Report No. : ALPL/03092025/09-1 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/W-4/28-20	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	164
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 65)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	18.56
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	40.22
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	9.58
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.35
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	7.86
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	284
18	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	138

Please refer last Page for Note and Remarks.

Verified By
Snehal Raut
Technical Manager

Authorized Signatories
Pranita Manchewar
Dy. Technical Manager

Chinmay Gerwa
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005218F

Test Report No. : ALPL/03092025/09-1 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-20	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.11
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	ANtr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	**Discipline : Chemical**	**Group : Residues in water**				
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Bhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gamay
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005218F

Test Report No. : ALPL/03092025/09-1 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-20	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtr/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**			**Group : Residues in water**		
35	**Pesticide Residues Organochlorine**					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005218F
Test Report No. :ALPL/03092025/09-1 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-20	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p' - DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dharaiya
Deputy Technical Manager

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

-----End of Report-----

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TC-12998

Test Report

ULR No.-TC129982500005219F
Test Report No. : ALPL/0309202S/09-2 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-21	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological**		**Group : Water**			
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical**		**Group : Water**			
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	158
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	24.12
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	30.26
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	12.8
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.02
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	7.56
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	364
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	160

Please refer last Page for Note and Remarks.

Verified By
Snehal Raut
Technical Manager

Authorized Signatories
Pranita Manchewar
Dy. Technical Manager

Chinmay Gadway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500095219F

Test Report No. : ALPL/03092025/09-2 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-21	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.06
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	**Discipline : Chemical**		**Group : Residues in water**			
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gadway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005219F
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Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-21	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/952/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtr/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gandhy
Deputy Quality Manager

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Issued To :	Sample Inward No.	ALPL/25082025/ENV-4/28-21	Analysis Start	26/08/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	25/08/2025	Analysis End	02/09/2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date	03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs ● Liability of Anacon Labs is limited to invoiced amount only ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise ● #Permissible limit in absence of an alternate source for drinking water ● 'mg/l' is equivalent to 'ppm' ● 'µg/l' is equivalent to 'ppb' ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification, ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.

Verified By

Keshish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005220F

Test Report No. : ALPL/03092025/09-3 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-22	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological**		**Group : Water**			
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical**		**Group : Water**			
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	170
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	20.68
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	28.32
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	14.58
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.10
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	6.25
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	364
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	154

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Ganjay
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500065220F
Test Report No. : ALPL/03092025/09-3 dated 03/09/2025 Page 2 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-22	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.09
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Mangarese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	ANtr/7.2/Res Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	**Discipline : Chemical**		**Group : Residues in water**			
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gamay
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005220F

Test Report No. : ALPL/03092025/09-3 dated 03/09/2025 Page 3 of 4

Issued To : Mis Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/26-22	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126595/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtl/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Kashet Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gatway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005220F

Test Report No. : ALPL/03092025/09-3 dated 03/09/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-22	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: • Please see watermark "Original Test Report" to confirm the authenticity of this report • Results shall be referred to tested sample(s) and applicable to tested parameters only • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • #Permissible limit in absence of an alternate source for drinking water. • 'mg/l' is equivalent to 'ppm'. • 'µg/l' is equivalent to 'ppb'. • **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method** • **BLQ= below limit of quantification, LOQ= limit of quantification.** • **Environmental condition – Satisfactory & Clear.** • **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** • **pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garwad
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005221F

Test Report No. : ALPL/03092025/09-4 dated 03/09/2025 Page 1 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/25082025/ENV-4/28-23		**Analysis Start** 26/08/2025
	Inward Date 25/08/2025		**Analysis End** 02/09/2025
	Work Order No. 4700126596/962/30.05.2024		**Report Issue Date** 03/09/2025
Sample Description Ground Water	**Purpose of Analysis** Drinking	**Sample Condition** Sealed & Ice Preserved	**Quantity Received** 5.0 Ltr & 250 ml
Sampled by Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANId/7.2/MON-01	**Sampling Date** 22/08/2025	**Sampling Time** 12.35 pm to 02.00 pm	**Sampling Location** Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	188
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	24.62
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	32.98
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	14.26
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.22
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	7.46
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	2.58
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	152

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005221F

Test Report No. : ALPL/03092025/09-4 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-23	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126595/952/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.11
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	ANtr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	**Discipline : Chemical**	**Group : Residues in water**				
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005221F

Test Report No. : ALPL/03092025/09-4 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-23	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical			Group : Residues in water		
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Kashinath Maharajan
Deputy Technical Manager

Authorized Signatory

Chinmay Gadway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005221F

Test Report No. : ALPL/03092025/09-4 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-23	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Angcon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Gaul Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Chanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500005222F
Test Report No. : ALPL/03092025/09-5 dated 03/09/2025 Page 1 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-24	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological**		**Group : Water**			
1	*Eschenchia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical**		**Group : Water**			
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	168
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	24.84
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	22.58
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	6.4
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.06
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	7.01
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	365
18	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	164

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garady
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005222F

Test Report No. : ALPL/03092025/09-5 dated 03/09/2025

Issued To : Mis Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-24	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.12
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	ANtr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV		**Discipline : Chemical**	**Group : Residues in water**			
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500006222F

Test Report No. : ALPL/03092025/09-5 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-24	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Samping Method No ANtd/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical			Group : Residues in water		
35	**Pesticide Residues Organochlorine**					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii*	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By

Kashish Bhanushali
Deputy Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500805222F

Test Report No. : ALPL/03092025/09-5 dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s. TATA Steel Limited)	**Sample Inward No.**	ALPL/25082025/ENV-4/28-24	**Analysis Start** 26/08/2025
	Inward Date	25/08/2025	**Analysis End** 02/09/2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03/09/2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANI/7.2/MON-01	22/08/2025	12.35 pm to 02.00 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'-DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'-DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

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REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dharajiya
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

-----End of Report-----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005809F
Test Report No. : ALPL/03102025/08-1 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-20	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	154
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	20.32
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	42.56
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	11.25
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.02
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	5.63
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	325
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	176

☐ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Gaway
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005809F
Test Report No. : ALPL/03102025/08-1 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-20	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANkl/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	**Discipline : Chemical**	**Group : Residues in water**				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.06
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	**Discipline : Chemical**	**Group : Residues in water**				
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

□ **Please refer last Page for Note and Remarks.**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Chanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gandhi
Deputy Quality Manager

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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Test Report

ULR No.-TC129982500005809F
Test Report No. : ALPL/03102025/08-1 dated 03.10.2025 Page 3 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-20	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

Please refer last Page for Note and Remarks.

Verified By
Kashish Dharirajani
Deputy Technical Manager

Authorized Signatory
Chinmay Garvey
Deputy Quality Manager

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005809F
Test Report No. : ALPL/03102025/08-1 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No. ALPL/23092025/W-4/28-20	Analysis Start	24.09.2025
	Inward Date 23.09.2025	Analysis End	30.09.2025
	Work Order No. 4700126596/962/30.05.2024	Report Issue Date	03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Kalmang Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical	Group : Residues in water				
35	Pesticide Residues Organochlorine					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (CP/7.6/05). ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

-----End of Report-----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500095810F
Test Report No. : ALPL/03102025/08-2 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-21	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	174
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	26.52
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	35.26
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	10.26
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.25
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	7.02
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	425
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	184

□ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005810F

Test Report No. : ALPL/03102025/08-2 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No. ALPL/23092025/W-4/28-21	Analysis Start	24.09.2025
	Inward Date 23.09.2025	Analysis End	30.09.2025
	Work Order No. 4700126596/962/30.05.2024	Report Issue Date	03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	Discipline : Chemical	Group : Residues in water				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.11
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	Discipline : Chemical	Group : Residues in water				
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

☐ Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Test Report No. : ALPL/03102025/08-2 dated 03.10.2025

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	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical			Group : Residues in water		
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p`-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p`-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

□ Please refer last Page for Note and Remarks.

Verified By
Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory
Chinmay Gelway
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005810F
Test Report No. : ALPL/03102025/08-2 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-21	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: • Please see watermark "Original Test Report" to confirm the authenticity of this report • Results shall be referred to tested sample(s) and applicable to tested parameters only • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • #Permissible limit in absence of an alternate source for drinking water. • 'mg/l' is equivalent to 'ppm'. • 'µg/l' is equivalent to 'ppb'. • ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method • BLQ= below limit of quantification, LOQ= limit of quantification, • Environmental condition – Satisfactory & Clear. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). • pH Value was measured at 25°C.

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By
Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

-----End of Report-----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005811F

Test Report No. : ALPL/03102025/08-3 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-22	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANid/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	142
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	18.25
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	30.26
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	9.86
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.25
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	7.26
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	241
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	162

☐ **Please refer last Page for Note and Remarks.**

Verified By

Shehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Gamay
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005811F

Test Report No. : ALPL/03102025/08-3 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-22	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	Discipline : Chemical	Group : Residues in water				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.08
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	Discipline : Chemical		Group : Residues in water			
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

□ Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005811F
Test Report No. : ALPL/03102025/08-3 dated 03.10.2025 Page 3 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-22	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

☐ **Please refer last Page for Note and Remarks.**

Verified By
Kashish Dhanwani
Deputy Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500005811F

Test Report No. : ALPL/03102025/08-3 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-22	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gandhalpada Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p`-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p`-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p`- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p`- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xvii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification.** ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gamray
Deputy Quality Manager

-----End of Report-----

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TC-12998

Test Report

ULR No.-TC129982500005812F
Test Report No. : ALPL/03102025/05-4 dated 03.10.2025 Page 1 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.**	ALPL/23092025/W-4/28-23	**Analysis Start** 24.09.2025
	Inward Date	23.09.2025	**Analysis End** 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	**Report Issue Date** 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANltd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	132
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	18.25
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	25.32
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	8.24
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.56
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	8.25
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	264
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	106

□ **Please refer last Page for Note and Remarks.**

Verified By

Sneha Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Barway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005812F
Test Report No. : ALPL/03102025/08-4 dated 03.10.2025 Page 2 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-23	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	Discipline : Chemical	Group : Residues in water				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25.	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.11
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	Discipline : Chemical		Group : Residues in water			
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

□ Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwarj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gerway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005812F
Test Report No. : ALPL/03102025/08-4 dated 03.10.2025 Page 3 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-23	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical		Group : Residues in water			
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p`-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p`-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

□ Please refer last Page for Note and Remarks.

Verified By
Kashish Dharamani
Deputy Technical Manager

Authorized Signatory
Chinmay Ganjay
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005812F

Test Report No. : ALPL/03102025/08-4 dated 03.10.2025 Page 4 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-23	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Gauli Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● **ANtr/7.2/RES/01, ANtr/7.2/RES/06, ANtr/7.2/RES/03 - Inhouse validated method ● BLQ= below limit of quantification, LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.5/05). ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By

Kashish Dharrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

-----End of Report-----

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TC-12998

Test Report

ULR No.-TC129982500005813F
Test Report No. : ALPL/03102025/08-5 dated 03.10.2025 Page 1 of 4

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-24	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline : Biological** **Group : Water**					
1	*Escherichia coli*	Per 100 ml	IS: 15185	Absent	Absent	Absent
II	**Discipline : Chemical** **Group : Water**					
2	Total Alkalinity (as Calcium Carbonate)	mg/l	IS 3025 (Part 23)	200	600	137
3	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	0.2	1.0	BLQ (LOQ-0.01)
4	Colour	Hazen	IS 3025 (Part 4) Clause 4	5	15	BLQ (LOQ-1))
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	No relaxation	BLQ (LOQ-0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	250	1000	26.25
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) Clause 5	75	200	56.24
8	Free Residual Chlorine	mg/l	IS 3025 (Part 26) Clause 7	0.2	1	BLQ (LOQ-0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.0	1.5	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) Clause 6	30	100	11.24
11	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	45	No relaxation	BLQ (LOQ-2)
12	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
13	pH value	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.88
14	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 5	0.001	0.002	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	200	400	8.21
16	Taste	-	IS 3025 (Part 8)	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	249
18	Turbidity	NTU	IS 3025 : (Part 10)	1	5	0.1
19	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) Clause 5	200	600	194

☐ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garwad
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005813F

Test Report No. : ALPL/03102025/08-5 dated 03.10.2025

Issued To :	Sample Inward No.	ALPL/23092025/W-4/28-24	Analysis Start	24.09.2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	23.09.2025	Analysis End	30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date	03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
III	Discipline : Chemical	Group : Residues in water				
20	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ (LOQ-0.02)
22	Barium (as Ba)	mg/l	IS 3025 (Part 2)	0.7	No relaxation	BLQ (LOQ-0.02)
23	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ (LOQ-0.02)
24	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ (LOQ-0.002)
26	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.07
27	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
28	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ (LOQ-0.02)
29	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	0.001	No relaxation	BLQ (LOQ-0.001)
30	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ (LOQ-0.02)
32	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ (LOQ-0.02)
IV	Discipline : Chemical	Group : Residues in water				
33	Mineral Oil	mg/l	ANtr/7.2/RES/06	1	No relaxation	BLQ (LOQ-0.001)
34	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/03	0.1	No relaxation	BLQ (LOQ-0.03)

□ Please refer last Page for Note and Remarks.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Kashish Dhanrajani
Deputy Technical Manager

Authorized Signatory

Chinmay Gadway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005813F

Test Report No. : ALPL/03102025/08-5 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-24	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Repreesentative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	Discipline : Chemical			Group : Residues in water		
35	Pesticide Residues Organochlorine					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01	0.01	No relaxation	BLQ (LOQ-0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01	0.04	No relaxation	BLQ (LOQ-0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01	20	No relaxation	BLQ (LOQ-0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01	0.03	No relaxation	BLQ (LOQ-0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01	125	No relaxation	BLQ (LOQ-0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)

□ Please refer last Page for Note and Remarks.

Verified By
Kashish Dharrajani
Deputy Technical Manager

Authorized Signatory
Chinmay Gadway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005813F
Test Report No. : ALPL/03102025/08-5 dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.	ALPL/23092025/W-4/28-24	Analysis Start 24.09.2025
	Inward Date	23.09.2025	Analysis End 30.09.2025
	Work Order No.	4700126596/962/30.05.2024	Report Issue Date 03.10.2025

Sample Description	Purpose of Analysis	Sample Condition	Quantity Received
Ground Water	Drinking	Sealed & Ice Preserved	5.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	17.09.2025	11.25 am to 02.45 pm	Near Sunindpur Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
V	**Discipline : Chemical**	**Group : Residues in water**				
35	**Pesticide Residues Organochlorine**					
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01	1	No relaxation	BLQ (LOQ-0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01	0.3	No relaxation	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01	190	No relaxation	BLQ (LOQ-0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01	-	-	BLQ (LOQ-0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01	3	No relaxation	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01	30	No relaxation	BLQ (LOQ-0.03)
xxiii	Phorate Phorate-sulfone Phorate-sulfoxide	µg/l	ANtr/7.2/RES/01	2	No relaxation	BLQ (LOQ-0.03)

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REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 10500 : 2012 for the tested parameters.**

Verified By
Kashish Bhanrajani
Deputy Technical Manager

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

-----End of Report-----

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Test Report

M/s Kalamang Iron Mine
M/s TATA Steel Limited
Badajamda-833 221.

Protocol for Measurement of Flow

Name of Unit	: Kalamang Iron Mine
Location Name & Coordinates	: **Karo River Upstream (Near Hati Chowk)**
Type of measurement	: Open Channel Flow
Date of measurement	: 15th September 2025
Formula used	: Flow Rate, Q (m^3/hrs.) = Velocity, v (m/hrs.) x Area, A (m^2)

Parameters measured

Parameter	Value	Value	Value
Width (meter)	14.1	16.3	12.6
Depth (meter)	0.69	0.84	0.72
Velocity (m/s)	0.30	0.26	0.34
Velocity (m/hrs.)	**1080**	**936**	**1224**

Calculation of Flow

11:30 A.M.	Area (m^2)	: Depth (m) x Width (m)	9.729
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**10507.32**
12:45 P.M.	Area (m^2)	: Depth (m) x Width (m)	13.692
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**12815.71**
1:50 P.M.	Area (m^2)	: Depth (m) x Width (m)	9.072
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**11104.13**

Remarks: - **Average Discharge from Karo River Upstream Near Hati Chowk is 11475.72 m^3/hrs**

Chemist
Atul Sapate
Sr. Field Chemist

Authorized Signatory
Chinmay Garwaly
Deputy Quality Manager

----End of Report----

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Test Report

M/s Kalamang Iron Mine
M/s TATA Steel Limited
Badajamda-833 221.

Protocol for Measurement of Flow

Name of Unit	: Kalamang Iron Mine
Location Name & Coordinates	: **Karo River Downstream (Near Hanuman Mandir)**
Type of measurement	: Open Channel Flow
Date of measurement	: 15th September 2025
Formula used	: Flow Rate, Q (m^3/hrs.) = Velocity, v (m/hrs.) x Area, A (m^2)

Parameters measured

Parameter	Value	Value	Value
Width (meter)	15.3	16.1	13.1
Depth (meter)	0.69	0.84	0.73
Velocity (m/s)	0.32	0.29	0.35
Velocity (m/hrs.)	**1152**	**1044**	**1260**

Calculation of Flow

11:50 A.M.	Area (m^2)	: Depth (m) x Width (m)	10.577
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**12161.66**
1:30 P.M.	Area (m^2)	: Depth (m) x Width (m)	13.524
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**14119.06**
2:10 P.M.	Area (m^2)	: Depth (m) x Width (m)	9.563
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**12049.38**

Remarks: - Average Discharge from Karo River Downstream near Hanuman Mandir is 12776.7 m^3/hrs.

Chemist
Atul Sapate
Sr. Field Chemist

Authorized Signatory
Chinmay Gahwai
Deputy Quality Manager

----End of Report----

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Test Report

M/s Kalamang Iron Mine
M/s TATA Steel Limited
Badajamda-833 221.

Protocol for Measurement of Flow

Name of Unit : Kalamang Iron Mine

Location Name & Coordinates : **Sona River Upstream**

Type of measurement : Open Channel Flow

Date of measurement : 15th September 2025

Formula used : Flow Rate, Q (m^3/hrs.) = Velocity, v (m/hrs.) x Area, A (m^2)

Parameters measured

Parameter	Value	Value	Value
Width (meter)	16.2	17.1	18.3
Depth (meter)	0.59	0.64	0.63
Velocity (m/s)	0.29	0.32	0.36
Velocity (m/hrs.)	**1044**	**1152**	**1296**

Calculation of Flow

2:50 P.M.	Area (m^2)	: Depth (m) x Width (m)	9.558
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**9978.52**
3:20P.M.	Area (m^2)	: Depth (m) x Width (m)	10.994
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**12607.49**
4:15 P.M.	Area (m^2)	: Depth (m) x Width (m)	11.529
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)	**14941.58**

Remarks: - Average Discharge from Koina River Upstream is 12509.21 m^3/hrs.

Chemist
Atul Sapate
Sr. Field Chemist

Authorized Signatory
Chinmay Ganvir
Deputy Quality Manager

----End of Report----

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Test Report

M/s Kalamang Iron Mine
M/s TATA Steel Limited
Badajamda-833 221.

Protocol for Measurement of Flow

Name of Unit	: Kalamang Iron Mine
Location Name & Coordinates	: **Sona River Downstream**
Type of measurement	: Open Channel Flow
Date of measurement	: 15th September 2025
Formula used	: Flow Rate, Q (m^3/hrs.) = Velocity, v (m/hrs.) x Area, A (m^2)

Parameters measured

	Parameter	Value	Value	Value
	Width (meter)	18.1	22.4	18.7
	Depth (meter)	0.84	0.81	0.72
	Velocity (m/s)	0.26	0.24	0.18
	Velocity (m/hrs.)	**936**	**864**	**648**
Calculation of Flow				
3:10P.M.	Area (m^2)	: Depth (m) x Width (m)		15.204
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)		**14230.94**
3:45 P.M.	Area (m^2)	: Depth (m) x Width (m)		18.144
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)		**15676.42**
4:55 P.M.	Area (m^2)	: Depth (m) x Width (m)		13.464
	Q (m^3/hrs.)	: v (m/hrs.) x A (m^2)		**8724.67**

Remarks: - **Average Discharge from Kolna River Downstream is 12877.34 m^3/hrs.**

Chemist
Ajit Safale
Sr. Field Chemist

Authorized Signatory
Chinmay Garad
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002238F
Test Report No. : ALPL/02052025/3-34A dated 02/05/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No. ALPL/240425/W/-6/25-20 & 21 Inward Date 24/04/2025	Analysis Start 25/04/2025 Analysis End 30/04/2025 Report Issue Date 02/05/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	19/04/2025	12:32 pm & 01:02 pm	1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	Discipline : Biological			Group : Water		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	Discipline : Chemical			Group : Water		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	7.35	7.69
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	5
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1125	1035
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	186	162
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	358	320
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	22.32	17.65
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	0.43	0.35
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

☐ Please refer last Page for Note and Remarks.

Verified By
Snehal Raut
Technical Manager

Authorized Signatories
Dr. Anupa Takhiwale
Sr. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500002238F
Test Report No. : ALPL/02052025/3-34A dated 02/05/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No. ALPL/240425/W-6/25-20 & 21 Inward Date 24/04/2025	Analysis Start 25/04/2025 Analysis End 30/04/2025 Report Issue Date 02/05/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	19/04/2025	12.32 pm & 01.02 pm	3. Sona River Upstream (SW-1) 4. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.46	0.38
13	Cadmium (as Cd)		IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antn/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	--	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
20	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	0.08	0.06

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● BLDn: below limit of quantification , LOQ= limit of quantification. ● pH Value was measured at 25°C.

REMARKS : As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By

Dhanashree Hiwari
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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Test Report

Test Report No. : ALPL/02052025/3-34B dated 02/05/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No. ALPL/240425/W-6/25-20 & 21 Inward Date 24/04/2025	Analysis Start 25/04/2025 Analysis End 30/04/2025 Report Issue Date 02/05/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANID/7.2/MON-01	19/04/2025	12:32 pm & 01:02 pm	5. Sona River Upstream (SW-1) 6. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	Discipline : Chemical Group : Water					
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.2	2.8
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	–	24	20
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.68	2.51
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	–	10.31	9.85
III	Discipline : Chemical Group : Residues in water					
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification, LOQ= limit of quantification.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500002239F
Test Report No. : ALPL/02052025/3-35A dated 02/05/2025

Issued To :	Sample Inward No.	ALPL/240425/W-8/25-22 & 23	Analysis Start	25/04/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	24/04/2025	Analysis End Report Issue Date	30/04/2025 02/05/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW 3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	19/04/2025	01:27 pm & 01:26 pm	1. Karo River Upstream (SW-3) 2. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Biological			Group : Water		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	Discipline : Chemical			Group : Water		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	6.68	5.74
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	5
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1365	1187
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	146	136
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	354	255
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	26.3	20.4
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	0.62	0.64
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

□ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Dr. Anupa Takhiwale
Sr. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500002239F
Test Report No. : ALPL/02052025/3-35A dated 02/05/2025

Issued To :	Sample Inward No.	ALPL/240425/W-6/25-22 & 23	Analysis Start	25/04/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	24/04/2025	Analysis End Report Issue Date	30/04/2025 02/05/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyebrata Dhal as per Sampling Method No.ANtl/7.2/MON-01	19/04/2025	01.27 pm & 01.25 pm	3. Karo River Upstream (SW-3) 4. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.48	0.42
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antl/7.2/Res.Incrg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	0.05	0.02

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REMARKS : As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

Test Report

Test Report No. : ALPL/02052025/3-356 Dated: 02/05/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/240425/W-6/25-22 & 23 **Inward Date** 24/04/2025	**Analysis Start** 25/04/2025 **Analysis End** 30/04/2025 **Report Issue Date** 02/05/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	19/04/2025	01:27 pm & 01.25 pm	5. Karo River Upstream (SW-3) 6. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Chemical		Group : Water		Subgroup : Surface water	
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.6	3.3
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	–	26	22
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.32	2.65
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	–	9.56	8.65
II	Discipline : Chemical		Group : Residues and contaminants in water		Subgroup : Trace metal elements	
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • 'mg/l' is equivalent to 'ppm'. • BLQ= below limit of quantification , LOQ= limit of quantification.

REMARKS : As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002936F
Test Report No. : ALPL/03062025/3-33A dated 03/06/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/26052025/W-7/31-26 & 27 **Inward Date** 26/05/2025	**Analysis Start** 27/05/2025 **Analysis End** 31/05/2025 **Report Issue Date** 03/06/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	23/05/2025	12:32 pm & 01:02 pm	3. Sona River Upstream (SW-1) 4. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.40	0.35
13	Cadmium (as Cd)		IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	--	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
20	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	0.09	0.05

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By

for Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

-----End of Report-----

ORIGINAL TEST REPORT

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Anacon Laboratories

Test Report

Test Report No. : ALPL/03062025/3-33B dated 03/06/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/26052025/W-7/31-26 & 27 **Inward Date** 26/05/2025	**Analysis Start** 27/05/2025 **Analysis End** 31/05/2025 **Report Issue Date** 03/06/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	23/05/2025	12:32 pm & 01:02 pm	5. Sona River Upstream (SW-1) 6. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	**Discipline : Chemical**		**Group : Water**			
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.1	2.5
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	26	21
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.89	2.64
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	12.3	10.6
III	**Discipline : Chemical**		**Group : Residues in water**			
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification , LOQ= limit of quantification.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

-----End of Report-----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002937F

Test Report No. : ALPL/03062025/3-34A dated 03/06/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/26052025/W-7/31-28 & 29 **Inward Date** 26/05/2025	**Analysis Start** 27/05/2025 **Analysis End** 31/05/2025 **Report Issue Date** 03/06/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	23/05/2025	01:27 pm & 01.25 pm	1. Karo River Upstream (SW-3) 2. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	**Discipline : Biological**			**Group : Water**		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	**Discipline : Chemical**			**Group : Water**		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	7.10	6.85
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1425	1296
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	165	145
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	365	310
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	30.26	23.56
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	0.75	0.62
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garwa
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002937F
Test Report No. : ALPL/03062025/3-34A dated 03/06/2025

Issued To :	Sample Inward No. / Inward Date	Analysis Start / Analysis End / Report Issue Date
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	ALPL/26052025/W-7/31-28 & 29 / 26/05/2025	27/05/2025 / 31/05/2025 / 03/06/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	23/05/2025	01:27 pm & 01.25 pm	3. Karo River Upstream (SW-3) 4. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.40	0.34
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	0.06	0.05

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

-----End of Report-----

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Anacon Laboratories

Test Report

Test Report No. : ALPL/03062025/3-34B dated 03/06/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/26052025/W-7/31-28 & 29 **Inward Date** 26/05/2025	**Analysis Start** 27/05/2025 **Analysis End** 31/05/2025 **Report Issue Date** 03/06/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	23/05/2025	01:27 pm & 01.25 pm	5. Karo River Upstream (SW-3) 6. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	**Discipline : Chemical**		**Group : Water**		**Subgroup : Surface water**	
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.0	2.5
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	30	25
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.65	2.31
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	10.56	8.89
II	**Discipline : Chemical**		**Group : Residues and contaminants in water**		**Subgroup : Trace metal elements**	
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvay
Deputy Quality Manager

-----End of Report-----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on **feedback@anacon.in**

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TC-12998

Test Report

ULR No.-TC129982500004177F

Test Report No. : ALPL/03072025/24-36A dated 03/07/2025

Issued To :	Sample Inward No.	ALPL/23062025/W-4/23-22 & 23	Analysis Start	24/06/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	23/06/2025	Analysis End	30/06/2025
			Report Issue Date	03/07/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	18/06/2025	1.55 pm & 2.20 pm	1 Karo River Upstream (SW-3) 2 Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Biological			Group : Water		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	Discipline : Chemical			Group : Water		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	6.86	7.32
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1389	1241
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	214	231
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	321	268
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	28.96	25.41
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	0.96	0.71
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pramila Manchewar
Dy. Technical Manager

Chinmay Gatway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500004177F

Test Report No. : ALPL/03072025/24-36A dated 03/07/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23062025/W-4/23-22 & 23 **Inward Date** 23/06/2025	**Analysis Start** 24/06/2025 **Analysis End** 30/06/2025 **Report Issue Date** 03/07/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	18/06/2025	1.55 pm & 2.20 pm	3. Karo River Upstream (SW-3) 4. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
III	Discipline : Chemical			Group : Residues in water		
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.45	0.38
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	0.06	0.31

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REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

-----End of Report-----

Authorized Signatory

Chinmay Garwey
Deputy Quality Manager

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Anacon Laboratories

Test Report

Test Report No. : ALPL/03072025/24-36B dated 03/07/2025 Page 1 of 1

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23062025/W-4/23-22 & 23 **Inward Date** 23/06/2025	**Analysis Start** 24/06/2025 **Analysis End** 30/06/2025 **Report Issue Date** 03/07/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	18/06/2025	1.55 pm & 2.20 pm	5. Karo River Upstream (SW-3) 6. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	**Discipline : Chemical**		**Group : Water**		**Subgroup : Surface water**	
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.8	3.2
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	25	21
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.96	2.54
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	5.36	5.85
II	**Discipline : Chemical**		**Group : Residues and contaminants in water**		**Subgroup : Trace metal elements**	
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise ● mg/l is equivalent to ppm. ● **BLQ= below limit of quantification , LOQ= limit of quantification.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004176F
Test Report No. : ALPL/03072025/24-35A cated 03/07/2025

Issued To :	Sample Inward No.	ALPL/23062025/W-4/23-20 & 21	Analysis Start	24/06/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	23/06/2025	Analysis End	30/06/2025
			Report Issue Date	03/07/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANId/7.2/MON-01	18/06/2025	11.30am & 12.10 pm	1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I			Discipline : Biological	Group : Water		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II			Discipline : Chemical	Group : Water		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	7.23	7.98
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1465	1258
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	216	185
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	359	285
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	22.36	18.65
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	1.23	0.96
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

Please refer last Page for Note and Remarks.

Verified By
Snehal Raut
Technical Manager

Authorized Signatories
Pranita Manchewar
Dy. Technical Manager

Chinmay Garwa
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004176F
Test Report No. : ALPL/03072025/24-35A dated 03/07/2025

Issued To :	Sample Inward No.	ALPL/23062025/W-4/23-20 & 21	Analysis Start	24/06/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	23/06/2025	Analysis End	30/06/2025
			Report Issue Date	03/07/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	18/06/2025	11.30am & 12.10 pm	3. Sona River Upstream (SW-1) 4. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
III	Discipline : Chemical			Group : Residues in water		
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.36	0.29
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	–	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	–	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
20	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	0.18	0.12

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification , LOQ= limit of quantification.** ● **pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By
Dhanashree Hiwanj
Sr. Technical Assistant

-----End of Report-----

Authorized Signatory
Chirmay Garway
Deputy Quality Manager

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Test Report

Test Report No. : ALPL/03072025/24-358 dated 03/07/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23062025/W-4/23-20 & 21 **Inward Date** 23/06/2025	**Analysis Start** 24/06/2025 **Analysis End** 30/06/2025 **Report Issue Date** 03/07/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtd/7.2/MON-01	18/06/2025	11.30am & 12.10 pm	5. Sona River Upstream (SW-1) 6. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	**Discipline : Chemical**		**Group : Water**			
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.8	3.5
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	20	18
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.96	2.81
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	8.63	7.65
III	**Discipline : Chemical**		**Group : Residues in water**			
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. **● BLQ= below limit of quantification , LOQ= limit of quantification.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By
Shehal Raut
Technical Manager

Authorized Signatory
Chinmay Ganvir
Deputy Quality Manager

-----End of Report-----

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TC-12998

Test Report

ULR No.-TC129982500004880F
Test Report No. : ALPL/04082025/26-35A dated 04/08/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/24072025/W-4/30-27 & 28 **Inward Date** 24/07/2025	**Analysis Start** 25/07/2025 **Analysis End** 01/08/2025 **Report Issue Date** 04/08/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	11.30am & 12.10 pm	1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	**Discipline : Biological**	**Group : Water**				
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	**Discipline : Chemical**	**Group : Water**				
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	6.89	7.25
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1326	1248
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	356	241
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	326	256
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	26.35	20.14
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	1.05	0.84
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

□ **Please refer last Page for Note and Remarks.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129962500604880F
Test Report No. : ALPL/04082025/26-35A dated 04/08/2025

Issued To :	Sample Inward No. / Inward Date	Analysis Start / End / Report Issue Date
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	ALPL/24072025/W-4/30-27 & 28 / 24/07/2025	25/07/2025 / 01/08/2025 / 04/08/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	11.30am & 12.10 pm	3. Sona River Upstream (SW-1) 4. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
III	Discipline : Chemical			Group : Residues in water		
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.32	0.27
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	--	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
20	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification , LOQ= limit of quantification.** ● pH Value was measured at 25°C.

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By
Dhanashree Hiwanj
Sr. Technical Assistant

----End of Report----

Authorized Signatory
Chinmay Ganvir
Deputy Quality Manager

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Test Report

Test Report No. : ALPL/04082025/26-35B **dated** 04/08/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/24072025/W-4/30-27 & 28 **Inward Date** 24/07/2025	**Analysis Start** 25/07/2025 **Analysis End** 01/08/2025 **Report Issue Date** 04/08/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	11.30am & 12.10 pm	5. Sona River Upstream (SW-1) 6. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	**Discipline : Chemical**	**Group : Water**				
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.6	3.2
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	26	20
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.59	1.98
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	7.46	5.28
III	**Discipline : Chemical**	**Group : Residues in water**				
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

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REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By
Snehal Raut
Technical Manager

-----End of Report-----

Authorized Signatory
Chinmay Garwal
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500004881F
Test Report No. : ALPL/04082025/26-36A dated 04/08/2025

Issued To :	Sample Inward No.	ALPL/24072025/W-4/30-29 & 30	Analysis Start	25/07/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	24/07/2025	Analysis End Report Issue Date	01/08/2025 04/08/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	1.55 pm & 2.20 pm	1. Karo River Upstream (SW-3) 2. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Biological			Group : Water		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	Discipline : Chemical			Group : Water		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	7.23	7.85
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1405	1362
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	458	365
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	358	304
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	32.96	24.88
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	1.23	0.86
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

□ Please refer last Page for Note and Remarks.

Verified By
Snehal Raut
Technical Manager

Authorized Signatories
Pranita Manchewar
Dy. Technical Manager

Chinmay Garwal
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500004881F

Test Report No. : ALPL/04082025/26-36A dated 04/08/2025

Issued To :	Sample Inward No.	ALPL/24072025/W-4/30-29 & 30	Analysis Start	25/07/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	24/07/2025	Analysis End Report Issue Date	01/08/2025 04/08/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	1.55 pm & 2.20 pm	3. Karo River Upstream (SW-3) 4. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.42	0.35
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● BLQ= below limit of quantification , LOQ= limit of quantification. ● pH Value was measured at 25°C.

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

-----End of Report-----

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Test Report

Test Report No. : ALPL/04082025/26-36B dated 04/08/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/24072025/W-4/30-29 & 30 **Inward Date** 24/07/2025	**Analysis Start** 25/07/2025 **Analysis End** 01/08/2025 **Report Issue Date** 04/08/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	21/07/2025	1.55 pm & 2.20 pm	5. Karo River Upstream (SW-3) 6. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	**Discipline : Chemical**		**Group : Water**		**Subgroup : Surface water**	
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.6	3.0
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	–	24	20
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.46	1.86
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	–	6.52	4.29
II	**Discipline : Chemical**		**Group : Residues and contaminants in water**		**Subgroup : Trace metal elements**	
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • 'mg/l' is equivalent to 'ppm'. • **BLQ= below limit of quantification , LOQ= limit of quantification.**

IARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS :1992 Class C for the tested parameters.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

-----End of Report-----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005228F

Test Report No. : ALPL/03092025/11-1A dated 03/09/2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/25082025/ENV-4/28-25 & 26 **Inward Date** 25/08/2025	**Analysis Start** 26/08/2025 **Analysis End** 02/09/2025 **Report Issue Date** 03/09/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	20/08/2025	11.30am & 12.10 pm	1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	**Discipline : Biological**	**Group : Water**				
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	**Discipline : Chemical**	**Group : Water**				
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	6.82	7.02
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1420	1360
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	421	326
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	365	302
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	22.32	18.64
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	1.23	1.06
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Marchewar
Dy. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005228F
Test Report No. : ALPL/03092025/11-1A dated 03/09/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/25082025/ENV-4/28-25 & 26 **Inward Date** 25/08/2025	**Analysis Start** 26/08/2025 **Analysis End** 02/09/2025 **Report Issue Date** 03/09/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	20/08/2025	11.30am & 12.10 pm	3. Sona River Upstream (SW-1) 4. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.38	0.30
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	--	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
20	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● mg/l is equivalent to 'ppm'. ● **BLQ= below limit of quantification , LOQ= limit of quantification.** ● **pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By
Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory
Chinmay Garwaw
Deputy Quality Manager

----End of Report----

ORIGINAL COPY

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Test Report

Test Report No. : ALPL/03092025/11-1B dated 03/09/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/25082025/ENV-4/28-25 & 26 **Inward Date** 25/08/2025	**Analysis Start** 26/08/2025 **Analysis End** 02/09/2025 **Report Issue Date** 03/09/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No ANtd/7.2/MON-01	20/08/2025	11.30am & 12.10 pm	5. Sona River Upstream (SW-1) 6. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	**Discipline : Chemical**	**Group : Water**				
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.4	2.8
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	28	24
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.65	2.02
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	6.98	5.28
III	**Discipline : Chemical**	**Group : Residues in water**				
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● mg/l is equivalent to ppm. ● **BLQ= below limit of quantification , LOQ= limit of quantification.**
REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By
Snehal Raut
Technical Manager

-----End of Report-----

Authorized Signatory
Chinmay Ganvay
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005229F
Test Report No. : ALPL/03092025/11-2A dated 03/09/2025 Page 1 of 2

Issued To :	Sample Inward No.	Analysis Start
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date 25/08/2025	Analysis End 02/09/2025 Report Issue Date 03/09/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	20/08/2025	1.55 pm & 2.20 pm	1. Karo River Upstream (SW-3) 2. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Biological			Group : Water		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	Discipline : Chemical			Group : Water		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	6.98	7.34
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1358	1245
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	398	325
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	326	241
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	35.26	26.85
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	1.02	0.96
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

Please refer last Page for Note and Remarks.

Verified By
Snehal Raut
Technical Manager

Authorized Signatories
Pranita Manchewar
Dy. Technical Manager

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005229F
Test Report No. : ALPL/03092025/11-2A dated 03/09/2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/25082025/ENV-4/28-27 & 28 **Inward Date** 25/08/2025	**Analysis Start** 26/08/2025 **Analysis End** 02/09/2025 **Report Issue Date** 03/09/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	20/08/2025	1.55 pm & 2.20 pm	3. Karo River Upstream (SW-3) 4. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.44	0.38
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	—	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

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REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By
Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

-----End of Report-----

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Anacon Laboratories

Test Report

Test Report No. : ALPL/03092025/11-2B dated 03/09/2025

Issued To :	Sample Inward No.	ALPL/25082025/ENV-4/28-27 & 28	Analysis Start	26/08/2025
M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Inward Date	25/08/2025	Analysis End	02/09/2025
			Report Issue Date	03/09/2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	20/08/2025	1.55 pm & 2.20 pm	5. Karo River Upstream (SW-3) 6. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Chemical		Group : Water		Subgroup : Surface water	
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.4	2.8
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	28	22
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.76	2.12
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	7.85	7.69
II	Discipline : Chemical		Group : Residues and contaminants in water		Subgroup : Trace metal elements	
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Liability of Anacon Labs is limited to invoiced amount only. • Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. • mg/l is equivalent to ppm. • **BLQ= below limit of quantification , LOQ= limit of quantification.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.

Verified By
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwa
Deputy Quality Manager

----End of Report-----

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005814F
Test Report No. : ALPL/03102025/10-1A dated 03.10.2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23092025/W-4/28-25 & 26 **Inward Date** 23.09.2025	**Analysis Start** 24.09.2025 **Analysis End** 30.09.2025 **Report Issue Date** 03.10.2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/NON-01	18.09.2025	11.50am & 12.45 pm	1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
I	**Discipline : Biological**	**Group : Water**				
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	**Discipline : Chemical**	**Group : Water**				
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	7.12	7.35
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1258	1042
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	326	258
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	388	324
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	14.26	10.32
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	1.05	0.84
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

☐ **Please refer last Page for Note and Remarks.**

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Ganvay
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982600005814F
Test Report No. : ALPL/03102025/10-1A dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23092025/W-4/28-25 & 26 **Inward Date** 23.09.2025	**Analysis Start** 24.09.2025 **Analysis End** 30.09.2025 **Report Issue Date** 03.10.2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-1 & 2	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	18.09.2025	11.50am & 12.45 pm	3. Sona River Upstream (SW-1) 4. Sona River Downstream (SW-2)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.6	0.45	0.41
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	--	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
20	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● mg/l is equivalent to 'ppm'. ● **BLQ= below limit of quantification , LOQ= limit of quantification.** ● pH Value was measured at 25°C.

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By
Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory
Chinmay Ganvay
Deputy Quality Manager

----End of Report----

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005815F
Test Report No. : ALPL/03102025/10-2A dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23092025/W-4/28-27 & 28 **Inward Date** 23.09.2025	**Analysis Start** 24.09.2025 **Analysis End** 30.09.2025 **Report Issue Date** 03.10.2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	18.09.2025	1.55 pm & 2.20 pm	1. Karo River Upstream (SW-3) 2. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	**Discipline : Biological**			**Group : Water**		
1	Coliform	/100ml	IS 15185	5000	Absent	Absent
II	**Discipline : Chemical**			**Group : Water**		
2	pH	-	IS 3025 (Part 11)	6.0 to 9.0	6.99	7.25
3	Colour	Hazen	IS 3025 (Part 4) Clause 4	300	5	10
4	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16)	1500	1426	1324
5	Chloride (as Cl)	mg/l	IS 3025 (Part 32) Clause 2	600	485	420
6	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/ Sec1) Clause 5	400	305	214
7	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/sec 1) Clause 6.4	50	17.45	10.65
8	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec 1) Clause 6	1.5	1.32	1.02
9	Cyanide (as CN)	mg/l	IS 3025 (Part 27/Sec 1) Clause 5	0.05	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
10	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec 1) Clause 6	0.005	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	mg/l	IS 3025 (Part 68)	1.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

☐ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut
Technical Manager

Authorized Signatories

Pranita Manchewar
Dy. Technical Manager

Chinmay Garwey
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005815F
Test Report No. : ALPL/03102025/10-2A dated 03.10.2025

Issued To : M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23092025/W-4/28-27 & 28 **Inward Date** 23.09.2025	**Analysis Start** 24.09.2025 **Analysis End** 30.09.2025 **Report Issue Date** 03.10.2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtc/7.2/MON-01	18.09.2025	1.55 pm & 2.20 pm	3. Karo River Upstream (SW-3) 4. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
III	Discipline : Chemical		Group : Residues in water			
12	Iron (as Fe)	mg/l	IS 3025 (Part 2)	0.5	0.47	0.31
13	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.01	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
14	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.2	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
16	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.1	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
17	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	15	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
18	Mercury (as Hg)	mg/l	Antr/7.2/Res.Inorg/01	--	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	1.5	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification , LOQ= limit of quantification. ● pH Value was measured at 25°C.**

REMARKS: As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is complying with IS 2296:1992 Class C for the tested parameters.**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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Test Report

Test Report No. : ALPL/03102025/10-2B dated 03.10.2025

Issued To : **M/s Kalamang Iron Mine** (M/s TATA Steel Limited)	**Sample Inward No.** ALPL/23092025/W-4/28-27 & 28 **Inward Date** 23.09.2025	**Analysis Start** 24.09.2025 **Analysis End** 30.09.2025 **Report Issue Date** 03.10.2025

Sample Description	Sample Source	Sample Particulars	Sample Condition	Quantity Received
Surface Water	1. Upstream 2. Downstream	Sample Code-SW-3 & 4	Sealed & Ice Preserved	2.0 Ltr & 250 ml

Sampled by	Sampling Date	Sampling Time	Sampling Location
Anacon Representative Mr. Satyabrata Dhal as per Sampling Method No.ANtd/7.2/MON-01	18.09.2025	1.55 pm & 2.20 pm	5. Karo River Upstream (SW-3) 6. Karo River Downstream (SW-4)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
I	Discipline : Chemical		Group : Water		Subgroup : Surface water	
1	Dissolved Oxygen	mg/l	IS 3025 (Part 38)	4.0	3.7	3.2
2	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17)	--	36	26
3	BOD (3 days at 27°C)	mg/l	IS-3025 (Part 44) : 2023	3.0	2.78	2.32
4	Chemical oxygen demand	mg/l	IS-3025(Part-58)	--	9.46	8.25
II	Discipline : Chemical		Group : Residues and contaminants in water		Subgroup : Trace metal elements	
5	Hexa Chromium (as Cr^{+6})	mg/l	IS 3025 (Part 52)	0.05	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● 'mg/l' is equivalent to 'ppm'. ● BLQ= below limit of quantification , LOQ= limit of quantification.

MARKS: As requested by the client, the sample was tested for the above parameters only. Sample bearing the details mentioned as above is complying with IS :1992 Class C for the tested parameters.

Verified By

Snehal Raut
Technical Manager

----End of Report-----

Authorized Signatory

Chinmay Garwal
Deputy Quality Manager

N.R. Sl. No. 1229
Date 31.3.23

Annexure-11

भारतीय गैर न्यायिक

एक सौ रुपये Rs. 100

रु. 100 ONE HUNDRED RUPEES

INDIA NON JUDICIAL

ଓଡ଼ିଶା ओड़िशा ODISHA

N 094316

Before the Notary Public Barbil, Dist-Keonjhar, Pdisha.

AFFIDAVIT

I, Atul Kumar Bhatnagar, son of S.S Bhatnagar, aged53 years , resident of Bungalow no- 28, Top Camp, PO: Noamundi- 833217, Dist: Singbum (West), Jharkhandpresently holding the post of General Manager (OM&Q), Tata Steel Limited is authorized signatory on behalf of M/s Tata Steel Limited, KalamangWest (Northern part) Iron Ore Block for filing application/ affidavit in connection with Environment Clearance, Consent to Establish, Consent to Operate, Hazardous Waste Authorization, Bio Medical Waste Authorization,do hereby solemnly affirm and undertake the following:

1. That, Environment Clearance is obtained for Kalamang West (Northern Part) Iron Ore Block from State Environment Impact AssessmentAuthority(SEIAA), Orissavide SEIAA File No. 55807/89-MINB1/06-2022 dated 18.10.2022.

2. That, production is not started and as per EC dated 18.10.2022we will ensure De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted.

That I, Atul Kumar Bhatnagar(Deponent) hereby read the above facts and submission and have understood the same and signing the undertaking on 31st day of March2023.

DEPONENT
General Manager
Ore Mines & Quarries
TATA STEEL

VERIFICATION

I,Atul Kumar Bhatnagarthe deponent do verify that the contents of this Affidavit are true to the best of my knowledge and belief

Verified on this 31st day of March 2023 at Barbil.

DEPONENT
General Manager
Ore Mines & Quarries
TATA STEEL

31-3-23

Anoja Manjari Mishra
ADVOCATE & NOTARY
Regd. No. ON/37/2012
BARBIL Dist Keonjhar (ODISHA)

Dt. No. 1180 Date 27-3-23

Value 100 Purpose All

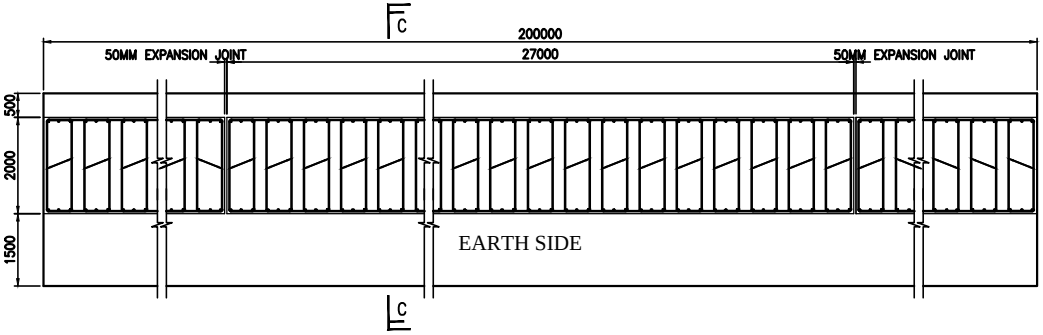
Name TATA Steel Ltd. A.K. Bhatnagar.

Address Naamuroli (JH)

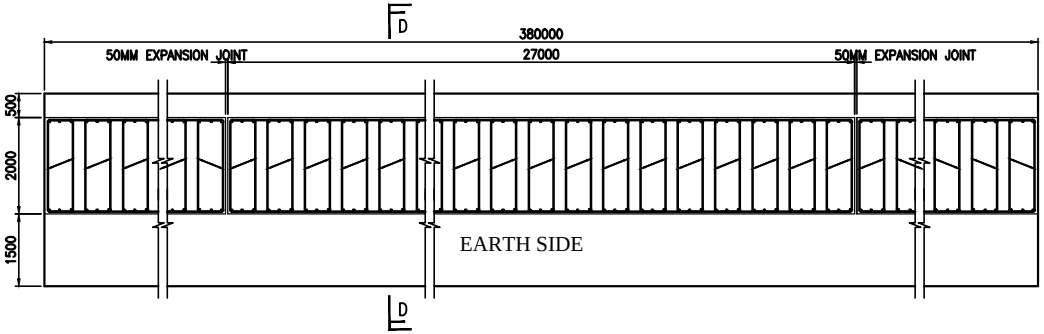
Govt. of Odisha
Stamp Vendor
Champua

General Manager
Ore Mines & Quarries
TATA STEEL

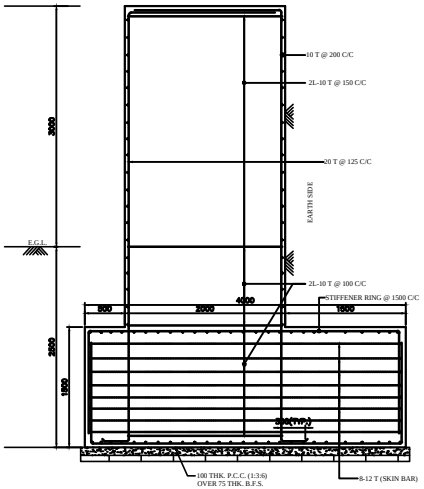
DRG.No. R-0



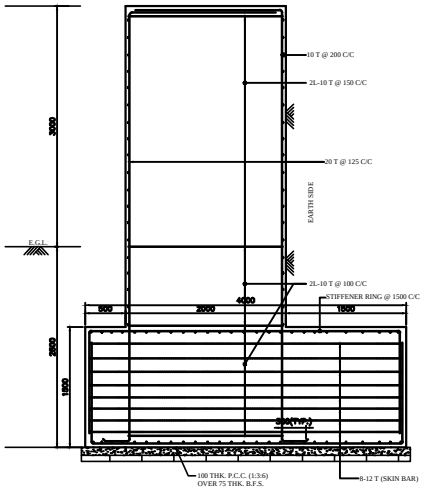
PLAN OF RETAINING WALL
SCALE 1:50



PLAN OF RETAINING WALL
SCALE 1:50



R.C. DETAIL OF RETAINING WALL(SECTION C-C)
SCALE 1:20



R.C. DETAIL OF RETAINING WALL(SECTION D-D)
SCALE 1:20

Notes:-

1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
2. ANY AMBIGUITY IN THE DRAWINGS SHOULD BE IMMEDIATELY BROUGHT TO THE NOTICE OF THE CONSULTANT BEFORE COMENCING
3. THIS DRAWING IS TO BE READ ALONG WITH ALL RELEVANT ARCHITECTURAL DRAWINGS.
4. ALL GRADE OF CONCRETE M30 UNTILL & UNLESS MENTIONED
5. ALL MATERIALS SHALL CONFORM TO RELEVANT I.S CODES.
6. FOR STEEL GRADE Fe 500 AS PER I.S 1786-2008.
7. ALL CHAIRS ARE 10T AND TO BE PROVIDED WHEREVER REQUIRED.
8. ALL SPACER BARS ARE 25T @ 300 C/C AND TO BE PROVIDED
9. LAPS, SPLICES & BOND LENGTH SHOULD BE 50 D WHERE "D" IS DIA OF BAR.
10. MINIMUM CLEAR COVER TO MAIN REINFORCEMENT IS AS FOLLOWS:

MEMBER	TOP	BOTTOM	SIDE
a. FDN	50	50	50
b. R.C.C. WALL	50	50	50

STRUCTURAL ENGINEERS
MITA SAHA
A.M.I.E(INDIA) M.E. (STRUCTURE)
CHARTERED ENGINEERS
A.M. 70918/5

MITA SAHA
Digitally signed by MITA SAHA
Date: 2023.04.13 11:16:37 +05'30'

PROPOSED DESIGN OF RETAINING WALL AT VARIOUS LOCATION OF KALMANNGA IRON ORE MINES.

CLIENTS :TATA STEEL LTD.

ARCHITECT:INDRANIL BAKSI & ASSOCIATES,
CE-14,SALT LAKE CITY,KOLKATA-700064
Ph.No.-9038008615/9231559776
Email ID-indranilbks87@gmail.com | SCALE-1:100

DRG NO.-IBA/MAK/KALMANNGA/RETAING WALL/WD/01

CONTENTS: DETAIL OF RETAINING WALL

DRAWN BY- GH | REVISION: 00 | DATE-12.04.2023

CHECKED BY- MS | APPROVED BY - MS

ANGLE OF PROJECTION

TATA STEEL LIMITED | M/C SYMBOL

DEPARTMENT

EQUIP/AREA: KALAMANNGA WEST (NORTHEN PART) IRON ORE MINES.

DETAIL: DETAIL OF RETAINING WALL

DATE		SIGN.	MATERIAL	SCALE	WEIGHT IN KG	SHEET No.	SHEET SIZE
DRN.				1:100		1	A1
CHD.							
APP.			DRG.No.				REV

No.	DATE	REVISION	DRN	PROCESS	CIVIL	ELEC	I&E	MECH	APP.	DRG.NO.	REFERENCES

NOTES

Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500002229F

Test Report No.: ALPL/02052025/3-21 Dated: 02/05/2025 Page 1 of 1

Issued To: M/s Kalamang Iron Mine (M/s TATA Steel Limited)	**Sample Inward No.:** ALPL/240425/ENV-6/25-11 **Inward Date:** 24/04/2025 **W.O.No.:** 4700120593/902/902-00.06.2024	**Report Issue Date:**02/05/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSUCEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:.**202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 14/04/2025 to 15/04/2025 **Time of sampling & duration :** 11.20 am & 24 hrs **Sampling location :** Near Kalamang Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/April-2025/2 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	Group: Atmospheric Pollution			Material or Product tested : Ambient Noise		
1.	Near Kalamang Village	IS 9989	58.5	41.6	Residential Area	55	45

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/06)

Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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TC-12998

Test Report

ULR No.-TC129982500002230F

Test Report No.: ALPL/02052025/3-22 Dated: 02/05/2025

Issued To: M/s Kalamang Iron Mine (M/s TATA Steel Limited)	Sample Inward No.: ALPL/240425/ENV-6/25-12 Inward Date: 24/04/2025 W.O.No.: 4700126506/982/982-30.05.2024	Report Issue Date:02/05/2025
Sample Subgroup : Ambient Noise	Sample Description: Ambient Noise	
Samplings details: Instrument ID : ALPL-TSL/CEIS-SLM/2024/01 Calibration Status :23/08/2024-22/08/2025 Make & Model : HTC-SL-1352 Serial No: 202405728	Sampled by Anacon Representative: Mr. Satyabrata Dhal Date of Sampling : 15/04/2025 to 16/04/2025 Time of sampling & duration : 11:50 am & 24 hrs Sampling location : Near Katesahi Village Reference to sampling procedure: ANld/7.2/Mon-01 Reference to sampling plan: ANld/7.3/Mon-02/April-2025/2 Weather Conditions : Satisfactory & Clear Any other observation: (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	Group: Atmospheric Pollution			Material or Product tested : Ambient Noise		
1	Near Katesahi Village	IS 9989	55.2	42.8	Residential Area	55	45

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/T.8/05).

Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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ANACON

TC-12998

Test Report

ULR No.-TC129982500002231F

Test Report No.: ALPL/02052025/3-23 Dated: 02/05/2025

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/240425/ENV-6/25-13 **Inward Date:** 24/04/2025 **W.O.No.:** 4700126696/062/962-30.05.2024	**Report Issue Date:**02/05/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 17/04/2025 to 18/04/2025 **Time of sampling & duration :** 12:35 pm & 24 hrs **Sampling location :** Near Guali Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/April-2025/2 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	Group: Atmospheric Pollution			Material or Product tested : Ambient Noise		
1	Near Guali Village	IS 9989	49.3	38.2	Residential Area	55	45

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs. • Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05)

Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002232F
Test Report No.: ALPL/2052025/3-24 Dated: 02/05/2025

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/240425/ENV-6/25-14 **Inward Date:** 24/04/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**02/05/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/05/2024-22/05/2025 **Make & Model :** HTC-SL-1352 **Serial No:.**202405725	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 18/04/2025 to 19/04/2025 **Time of sampling & duration :** 12:55 pm & 24 hrs **Sampling location :** Near Malda Village **Reference to sampling procedure:** ANld/7.2/f/Mon-01 **Reference to sampling plan:** ANld/7.3/Mon-02/April-2025/2 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) :-	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Malda Village	IS 9989	66.8	41.2	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129862500002233F
Test Report No.: ALPL/02052025/3-25 Dated: 02/05/2025

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/240425/ENV-6/25-15 **Inward Date:** 24/04/2025 **W.O.No.:** 4700126866/962/962-30.06.2024	**Report Issue Date:**02/05/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/09/2024-22/09/2025 **Make & Model :** HTC-SL-1352 **Serial No:.**202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 16/04/2025 to 17/04/2025 **Time of sampling & duration :** 1:10 pm & 24 hrs **Sampling location : Near Gandhalpada Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/April-2025/2 **Weather Conditions :** Satisfactory & Clear **Any other observation: (If applicable) :** -	

Discipline: Chemical
Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Gandhalpada Village	IS 9989	54.6	42.9	Residential Area	55	45

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/08).

Remark: - All Results are within Limit as per CPCB Standards for Residential Area

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500002927F

Test Report No.: ALPL/03062025/3-21 Dated: 03.06.2025

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/260525/ENV-7/31-11 **Inward Date:** 26/05/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/06/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:**.202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 19/05/2025 **Time of sampling & duration :** 11:20 am & 24 hrs **Sampling location :** Near Kalamang Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/May-2025/3 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1.	Near Kalamang Village	IS 9989	52.1	40.5	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwe
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500002928F

Test Report No.: ALPL/02052025/3-22 Dated: 02/05/2025

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/260525/ENV-7/31-12 **Inward Date:** 26/05/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/06/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:**.202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 20/05/2025 **Time of sampling & duration :** 11:50 am & 24 hrs **Sampling location :** Near Katesahi Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ May-2025/3 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Katesahi Village	IS 9989	54.1	39.5	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002929F

Test Report No.: ALPL/02052025/3-23 Dated: 02/05/2025

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/260525/ENV-7/31-13 **Inward Date:** 26/05/2025 **W.O.No.:** 4700126598/962/962-30.05.2024	**Report Issue Date:**03/06/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No**:.202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 20/05/2025 **Time of sampling & duration :** 12:35 pm & 24 hrs **Sampling location :** Near Guali Village **Reference to sampling procedure:** ANld/7.2/Mon-01 **Reference to sampling plan:** ANld/7.3/Mon-02/ May-2025/3 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Guali Village	IS 9989	52.8	42.9	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500002930F
Test Report No.: ALPL/02052025/3-24 Dated: 02/05/2025 Page 1 of 1

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/260525/ENV-7/31-14 **Inward Date:** 26/05/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/06/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No** .202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 21/05/2025 **Time of sampling & duration :** 12:55 pm & 24 hrs **Sampling location : Near Malda Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ May-2025/3 **Weather Conditions :** Satisfactory & Clear **Any other observation**: (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Malda Village	IS 9989	54.3	41.9	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

Test Report

ULR No.-TC129982500002931F

Test Report No.: ALPL/02052025/3-25 Dated: 02/05/2025

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/260525/ENV-7/31-15 **Inward Date:** 26/05/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/06/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No**:.202405728	**Sampled by Anacon Representative:** Mr. Satyabrata Dhal **Date of Sampling :** 22/05/2025 **Time of sampling & duration :** 1:10 pm & 24 hrs **Sampling location : Near Gandhalpada Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ May-2025/3 **Weather Conditions :** Satisfactory & Clear **Any other observation**: (If applicable) : -	

Discipline: Chemical

Group: Atmospheric Pollution

Test Results

Ambient Noise Level

Sr. No.	Location	Test Method	Test Result dB (A)		CPCB standards for Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Gandhalpada Village	IS 9989	50.9	38.4	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by
Snehal Raut
Technical Manager

Authorized Signatory
Chinmay Garwa
Deputy Quality Manager

----End of Report----

ORIGINAL REPORT

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TC-12998

Test Report

ULR No.-TC129982500004171F

Test Report No.:ALPL/03072025/24-21 Dated: 03/07/2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.**: ALPL/16062025/ENV-4/15-11 **Inward Date:** 16/06/2025 **W.O.No.**: 4700126596/962/962-30.05.2024	**Report Issue Date**:03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description**:Ambient Noise	
Samplings details: **Instrument ID** : ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status** :23/08/2024-22/08/2025 **Make & Model** : HTC-SL-1352 **Serial No**:.202405728	**Sampled byAnacon Representative**: Mr.Satyabrata Dhal **Date of Sampling** : 09/06/2025 **Time of sampling& duration** : 11:20 am& 24 hrs **Sampling location :Near Kalamang Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions** : Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1.	Near Kalamang Village	IS 9989	50.9	40.5	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Gerway
Deputy Quality Manager

---End of Report---

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500094172F

Test Report No.:ALPL/03072025/24-22 Dated: 03/07/2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/16062025/ENV-4/15-12 **Inward Date:** 16/06/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No**: 202405728	**Sampled by Anacon Representative:** Mr Satyabrata Dhal **Date of Sampling :** 10/06/2025 **Time of sampling & duration :** 11:50 am & 24 hrs **Sampling location :**Near Katesahi Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions :** Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1	Near Katesahi Village	IS 9989	51.3	43.5	Residential Area	55	45

NOTES: ● Please see watermark 'Original Test Report' to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity caused on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Srishal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report----

ORIGINAL TEST REPORT

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500004173F

Test Report No.:ALPL/03072025/24-23 Dated: 03/07/2025

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.**: ALPL/16062025/ENV-4/15-13 **Inward Date:** 16/06/2025 **W.O.No.**: 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID** : ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status** :23/08/2024-22/08/2025 **Make & Model** : HTC-SL-1352 **Serial No**:.202405728	**Sampled by Anacon Representative**: Mr.Satyabrata Dhal **Date of Sampling** : 11/06/2025 **Time of sampling & duration** : 12:35pm & 24 hrs **Sampling location** :**Near Guali Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions** : Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested** : Ambient Noise		
1	Near Guali Village	IS 9989	50.3	42.9	Residential Area	55	45

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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TC-12998

ULR No.-TC129982500004174F

Test Report

Test Report No.:ALPL/03072025/24-24 Dated: 03/07/2025

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/16062025/ENV-4/15-14 **Inward Date:** 16/06/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 12/06/2025 **Time of sampling & duration :** 12:55pm & 24 hrs **Sampling location :Near Malda Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Malda Village	IS 9989	54.3	41.9	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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Test Report

ULR No.-TC129982500004175F

Test Report No.:ALPL/03072025/24-25 Dated: 03/07/2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.**: ALPL/16062025/ENV-4/15-15 **Inward Date:** 16/06/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No**:.202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 13/06/2025 **Time of sampling & duration :** 1.10 pm & 24 hrs **Sampling location :Near Gandhalpada Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/June-2025/6 **Weather Conditions :** Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Noise			
1	Near Gandhalpada Village	IS 9989	52.3	42.9	Residential Area	55	45

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Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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Test Report

ULR No.-TC129982500004171F

Test Report No.:ALPL/03072025/24-21 Dated: 03/07/2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.**: ALPL/16062025/ENV-4/15-11 **Inward Date:** 16/06/2025 **W.O.No.**: 4700126596/962/962-30.05.2024	**Report Issue Date**:03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description**:Ambient Noise	
Samplings details: **Instrument ID** : ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status** :23/08/2024-22/08/2025 **Make & Model** : HTC-SL-1352 **Serial No**:.202405728	**Sampled byAnacon Representative**: Mr.Satyabrata Dhal **Date of Sampling** : 09/06/2025 **Time of sampling& duration** : 11:20 am& 24 hrs **Sampling location :Near Kalamang Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions** : Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1.	Near Kalamang Village	IS 9989	50.9	40.5	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Gerway
Deputy Quality Manager

---End of Report---

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ULR No.-TC129982500094172F

Test Report No.:ALPL/03072025/24-22 Dated: 03/07/2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/16062025/ENV-4/15-12 **Inward Date:** 16/06/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No**: 202405728	**Sampled by Anacon Representative:** Mr Satyabrata Dhal **Date of Sampling :** 10/06/2025 **Time of sampling & duration :** 11:50 am & 24 hrs **Sampling location :**Near Katesahi Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions :** Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1	Near Katesahi Village	IS 9989	51.3	43.5	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Srishal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500004173F

Test Report No.:ALPL/03072025/24-23 Dated: 03/07/2025

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.**: ALPL/16062025/ENV-4/15-13 **Inward Date:** 16/06/2025 **W.O.No.**: 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID** : ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status** :23/08/2024-22/08/2025 **Make & Model** : HTC-SL-1352 **Serial No**:.202405728	**Sampled by Anacon Representative**: Mr.Satyabrata Dhal **Date of Sampling** : 11/06/2025 **Time of sampling & duration** : 12:35pm & 24 hrs **Sampling location** :**Near Guali Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions** : Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested** : Ambient Noise		
1	Near Guali Village	IS 9989	50.3	42.9	Residential Area	55	45

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Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

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ULR No.-TC129982500004174F

Test Report

Test Report No.:ALPL/03072025/24-24 Dated: 03/07/2025

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/16062025/ENV-4/15-14 **Inward Date:** 16/06/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 12/06/2025 **Time of sampling & duration :** 12:55pm & 24 hrs **Sampling location :Near Malda Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ June-2025/6 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Malda Village	IS 9989	54.3	41.9	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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Test Report

ULR No.-TC129982500004175F

Test Report No.:ALPL/03072025/24-25 Dated: 03/07/2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.**: ALPL/16062025/ENV-4/15-15 **Inward Date:** 16/06/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/07/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No**:.202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 13/06/2025 **Time of sampling & duration :** 1.10 pm & 24 hrs **Sampling location :Near Gandhalpada Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/June-2025/6 **Weather Conditions :** Satisfactory & Clear **Any other observation**: (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution		**Material or Product tested :** Ambient Noise			
1	Near Gandhalpada Village	IS 9989	52.3	42.9	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---End of Report---

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TC-12998

Test Report

ULR No.-TC129982500005223F

Test Report No.: ALPL/03092025/10-1 Dated: 03/09/2025 Page 1 of 1

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/25082025/ENV-4/28-11 **Inward Date:** 25/08/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/09/2025
Sample Subgroup : Ambient Noise	**Sample Description:**Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled byAnacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 18/08/2025 **Time of sampling& duration :** 11:20 am& 24 hrs **Sampling location :**Near Kalamang Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/August-2025/8 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1.	Near Kalamang Village	IS 9989	52.6	41.3	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Test Report

ULR No.-TC129982500005224F

Test Report No.: ALPL/03092025/10-2 Dated: 03/09/2025 Page 1 of 1

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/25082025/ENV-4/28-12 **Inward Date:** 25/08/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/09/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:**.202405728	**Sampled by Anacon Representative:** Mr Satyabrata Dhal **Date of Sampling :** 19/08/2025 **Time of sampling & duration :** 11:50 am & 24 hrs **Sampling location :**Near Katesahi Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/August-2025/8 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1	Near Katesahi Village	IS 9989	54.1	40.6	Residential Area	55	45

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Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Ganvir
Deputy Quality Manager

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TC-12998

Test Report

ULR No.-TC129982500005225F

Test Report No.: ALPL/03092025/10-3 Dated: 03/09/2025 Page 1 of 1

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/25082025/ENV-4/28-13 **Inward Date:** 25/08/2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03/09/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 20/08/2025 **Time of sampling & duration :** 12:35pm & 24 hrs **Sampling location :**Near Guali Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/August-2025/8 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Guali Village	IS 9989	52.9	42.1	Residential Area	55	45

NOTES ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameter/s only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).

Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500005226F

Test Report No.: ALPL/0309/2025/10-4 Dated: 03/09/2025 Page 1 of 1

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/25082025/ENV-4/28-14 **Inward Date:** 25/08/2025 **W.O.No.:** 4700126595/952/962-30.05.2024	**Report Issue Date:**03/09/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:**.202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 21/08/2025 **Time of sampling & duration :** 12:55pm & 24 hrs **Sampling location :Near Malda Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/August-2025/8 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Malda Village	IS 9989	54.0	41.6	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwad
Deputy Quality Manager

---End of Report---

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500005227F

Test Report No.: ALPL/03092025/10-5 Dated: 03/09/2025 Page 1 of 1

Issued To: **M/s Kalamang Iron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/25082025/ENV-4/28-15 **Inward Date:** 25/08/2025 **W.O.No.:** 4700126596/952/962-30.05.2024	**Report Issue Date:**03/09/2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Calibration Status :**23/08/2024-22/08/2025 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 22/08/2025 **Time of sampling & duration :** 1:10 pm & 24 hrs **Sampling location :Near Gandhalpada Village** **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/August-2025/8 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Gandhalpada Village	IS 9989	53.6	42.8	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

---*End of Report*---

ORIGINAL TEST DATA

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TC-12998

Test Report

ULR No.-TC129982500005804F
Test Report No.: ALPL/03102025/09-1 Dated: 03.10.2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/23092025/ENV-4/28-11 **Inward Date:** 23.09.2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03.10.2025
Sample Subgroup : Ambient Noise	**Sample Description:**Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled by**Anacon Representative: Mr.Satyabrata Dhal **Date of Sampling :** 15.09.2025 **Time of sampling& duration :** 11:20 am& 24 hrs **Sampling location :**Near Kalamang Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/September-2025/9 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1.	Near Kalamang Village	IS 9989	51.6	40.5	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwey
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500005805F

Test Report No.: ALPL/03102025/09-2 Dated: 03.10.2025

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/23092025/ENV-4/28-12 **Inward Date:** 23.09.2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03.10.2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Make & Model :** HTC-SL-1352 **Serial No:** 202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 16.09.2025 **Time of sampling & duration :** 11:50 am & 24 hrs **Sampling location :**Near Katesahi Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ September-2025/9 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution	**Material or Product tested :** Ambient Noise				
1	Near Katesahi Village	IS 9989	52.6	42.7	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Gaiway
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500005806F

Test Report No.: ALPL/03102025/09-3 Dated: 03.10.2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/23092025/ENV-4/28-13 **Inward Date:** 23.09.2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03.10.2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Make & Model :** HTC-SL-1352 **Serial No** :202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 17.09.2025 **Time of sampling & duration :** 12:35pm & 24 hrs **Sampling location :**Near Guali Village **Reference to sampling procedure:** ANtd/7.2/Mon-01 **Reference to sampling plan:** ANtd/7.3/Mon-02/ September-2025/9 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Guali Village	IS 9989	50.9	41.5	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chirgney Garway
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.-TC129982500005807F

Test Report No.: ALPL/03102025/09-4 Dated: 03.10.2025 Page 1 of 1

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/23092025/ENV-4/28-14 **Inward Date:** 23.09.2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03.10.2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CE/S-SLM/2024/01 **Make & Model :** HTC-SL-1352 **Serial No:**.202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 18.09.2025 **Time of sampling & duration :** 12.55pm & 24 hrs **Sampling location :Near Malda Village** **Reference to sampling procedure:** ANld/7.2/Mon-01 **Reference to sampling plan:** ANld/7.3/Mon-02/ September-2025/9 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Malda Village	IS 9989	53.4	42.8	Residential Area	55	45

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Remark - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Barway
Deputy Quality Manager

---End of Report---

ORIGINAL TEST REPORT

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Anacon Laboratories

TC-12998

Test Report

ULR No.-TC129982500005808F

Test Report No.: ALPL/03102025/09-5 **Dated:** 03.10.2025

Issued To: **M/s Kalamangiron Mine** **(M/s TATA Steel Limited)**	**Sample Inward No.:** ALPL/23092025/ENV-4/28-15 **Inward Date:** 23.09.2025 **W.O.No.:** 4700126596/962/962-30.05.2024	**Report Issue Date:**03.10.2025
Sample Subgroup : Ambient Noise	**Sample Description:** Ambient Noise	
Samplings details: **Instrument ID :** ALPL-TSL/CEIS-SLM/2024/01 **Make & Model :** HTC-SL-1352 **Serial No:**.202405728	**Sampled by Anacon Representative:** Mr.Satyabrata Dhal **Date of Sampling :** 19.9.2025 **Time of sampling & duration :** 1:10 pm & 24 hrs **Sampling location :Near Gandhalpada Village** **Reference to sampling procedure:** ANId/7.2/Mon-01 **Reference to sampling plan:** ANId/7.3/Mon-02/ September-2025/9 **Weather Conditions :** Satisfactory & Clear **Any other observation:** (If applicable) : -	

Test Results

Sr. No.	Location	Test Method	Ambient Noise Level		CPCB standards for Ambient Noise Levels		
			Leq dB (A) (Day Time)	Leq dB (A) (Night Time)	Category of Areas:	Leq dB (A) (Day Time)	Leq dB (A) (Night Time)
	Discipline: Chemical	**Group:** Atmospheric Pollution			**Material or Product tested :** Ambient Noise		
1	Near Gandhalpada Village	IS 9989	52.4	41.6	Residential Area	55	45

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Remark: - All Results are within Limit as per CPCB Standards for Residential Area.

Verified by

Ms. Snehal Raut
Technical Manager

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----End of Report----

ORIGINAL TEST REPORT

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CSIR-Central Institute of Mining and Fuel Research

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद / Council of Scientific & Industrial Research)
(विज्ञान एवं प्रौद्योगिकी मंत्रालय, भारत सरकार / Ministry of Science & Technology, Govt. of India)
बरवा रोड, धनबाद - 826001, झारखण्ड, भारत / Barwa Road, Dhanbad - 826001, Jharkhand, India
(आईएसओ 9001 प्रमाणित संस्थान / ISO 9001 Certified Institute)

By Email / Speed Post
ईमेल / स्पीड पोस्ट द्वारा

पत्र संख्या : CIMFR/SSLM/SKR/2024/ 493 दिनांक: 27.06.2024

सेवा मे,
श्री एस.एस.मिश्रा
प्रमुख, कलामंग पश्चिम
कलामंग और गंधालपाड़ा परियोजना कार्यालय
जोडा वेस्ट, जोडा
क्योंझर, ओडिशा
पिन- 758034

To,
Sri S. S. Mishra
Head, Kalamang West
Kalamang and Gandhalpada Project Office
Joda West, Joda
Keonjhar, Odisha
Pin- 758034
Mobile – 7752004329

विषय: "मैसर्स टाटा स्टील लिमिटेड की कलामांग पश्चिम (उत्तरी भाग) लौह अयस्क के खदान और डंप के लिए ढलान स्थिरता" पर अंतिम रिपोर्ट।

Subject: Final Report on "Slope Stability for Pit and Dumps of Kalamang West (Northern Part) Iron Ore Mine of M/s TATA STEEL LTD."

महोदय / Sir

कार्यादेश क्रमांक 4700115685/962, आदेश जारी होने की तारीख 04.09.2023, के संदर्भ में कृपया आपके अवलोकनार्थ उपर्युक्त विषय पर रिपोर्ट की दो प्रतियां संलग्न हैं। कृपया इसकी प्राप्ति स्वीकार करें।
इसके अलावा, इससे संबंधित ग्राहक संतुष्टि फीडबैक फॉर्म संलग्न है जिसे टिक-चिह्नित करना, भरना, हस्ताक्षरित करना, मुहर लगाना और फिर हमें वापस लौटाना होगा। इस परियोजना को पूरा करने में सीएसआईआर-सीआईएमएफआर टीम द्वारा किए गए प्रयासों को ध्यान में रखते हुए, हमें ग्राहक संतुष्टि फीडबैक फॉर्म के साथ आपकी ओर से एक प्रशंसा पत्र प्राप्त करने में खुशी होगी।

With reference to work order no. 4700115685/962, order release date 04.09.2023, kindly find attached two copies of the report on the above-mentioned subject for your kind perusal. Kindly acknowledge the receipt of the same.
Moreover, kindly find the customer satisfaction feedback on the subject which needs to be tick-marked, filled, signed, stamped and then returned back to us. Considering the effore placed by CSIR-CIMFR team in completing this project, we would be happy to get an appreciation letter from your side along with customer satisfaction feedback form.

धन्यवाद / Thanking You!

भवदीय / Yours Faithfully

संजय कुमार राय 27.06.2024

(डॉ संजय कुमार राय / Dr. SANJAY KUMAR ROY)
मुख्य वैज्ञानिक और अनुसंधान समूह प्रमुख / Chief Scientist & HORG
ढलान स्थिरीकरण और भूस्खलन प्रबंधन / Slope Stabilisation and Landslide Management,
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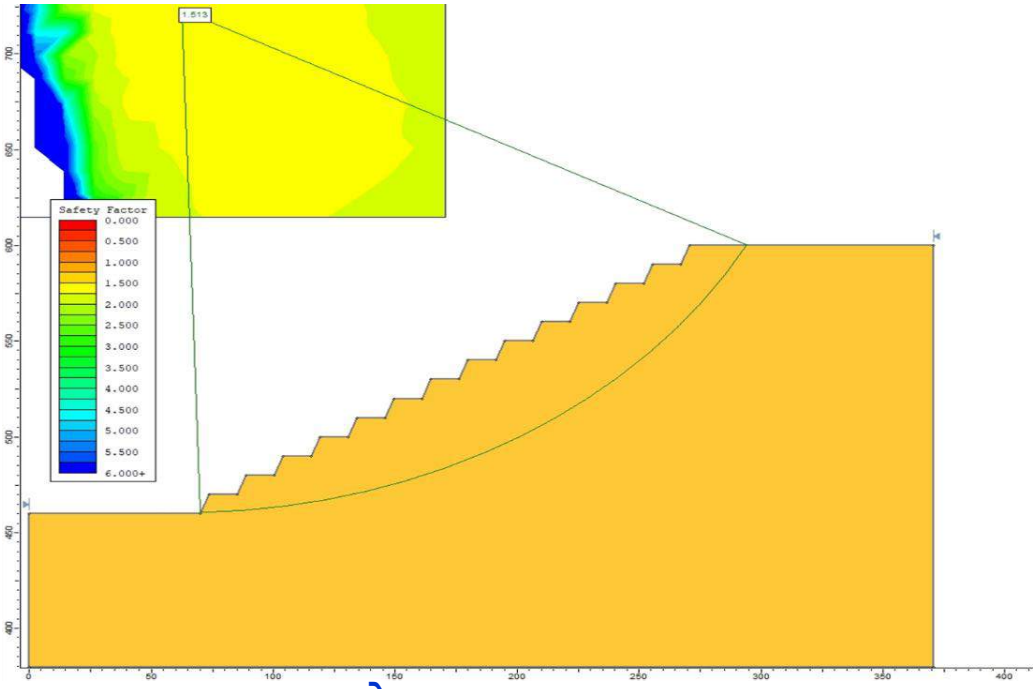
CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH BARWA ROAD, DHANBAD
(वैज्ञानिक और औद्योगिक अनुसंधान परिषद)
(Council of Scientific and Industrial Research)

परियोजना का शीर्षक / PROJECT TITLE:

मेसर्स टाटा स्टील लिमिटेड की कलमांग पश्चिम (उत्तरी भाग) लौह अयस्क के खदान और डंपों के लिए ढलान स्थिरता पर वैज्ञानिक अध्ययन और सलाह।

SCIENTIFIC STUDY AND ADVICE ON SLOPE STABILITY FOR PIT AND DUMPS OF KALAMANG WEST (NORTHERN PART) IRON ORE MINE OF M/s TATA STEEL LTD.



प्रायोजक /SPONSOR:

मैसर्स टाटा स्टील लिमिटेड (M/s TATA STEEL LTD)

जून, 2024 / June, 2024

परियोजना क्रमांक (PROJECT NO.): CNP/5246/2023-24

CSIR-Central Institute of Mining and Fuel Research, Dhanbad

(Council of Scientific and Industrial Research)

Project Title	:	Scientific Study and Advice on Slope Stability for Pit and Dumps of Kalamang West (Northern Part) Iron Ore Mine of M/S Tata Steel Ltd.
CIMFR Project No.	:	CNP/5246/2023-24
Sponsor	:	M/s Tata Steel Limited
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June, 2024

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SCIENTIFIC STUDY AND ADVICE ON SLOPE STABILITY FOR PIT AND DUMPS OF KALAMANG WEST (NORTHERN PART) IRON ORE MINE OF M/s TATA STEEL LTD.

INTRODUCTION

Opencast mining involves removal of overburden to expose different seams for mineral production. Overburden removed from the mine can be disposed at external dumps created at a site away from the ore bearing area or at internal dumps created by in-pit dumping concurrent to the creation of voids by extraction of ore. Advantages of in-pit dumping include less requirement of additional land and low cost of transport and is a preferred choice of the mine management, wherever it is possible.

The benefit of an open pit operation largely depends on the use of the steepest slopes possible, which should not fail during the life of the mine. Steepening the slopes of a mine, thereby reducing the amount of material to be excavated, can save a vast sum of money. At the same time excessive steepening may result into slope failure leading to loss of production, extra stripping costs to remove failed material, reforming of benches, rerouting of haul roads and production delays. The design of dumps is dictated by safety considerations of the dump so as to avoid dump failure, and the limitations of space available for external dump within mining lease area to accommodate high volume of overburden dump material. Design of internal and external dumps are done considering safety and economy.

The slope stability department of CSIR-CIMFR is rendering its services for optimum and safe slope designs of mines and dumps for different mines all over India from last about 30 years. During last ten years CIMFR has completed more than 50 projects in coal and non-coal sectors on slope stability.

M/s TATA STEEL Limited, requested CSIR-CIMFR for slope stability studies of pit and dumps of Kalamang West (Northern Part) Iron Ore Mine, Kalamang, Koida, Sundargarh, Odisha, vide work order no. 4700115685/962 dated 04/09/2023. Accordingly, CSIR-CIMFR team visited for physical observation of the virgin mine, collection of relevant plans, sections and samples. Since the mine is virgin, therefore, samples were collected from outcrop regions, exposed portions, neighboring mines for estimating the shear strength properties of the materials present in the mine region.

The scope of work includes pit and dump slope stability of proposed pits and dumps in Kalamang West (Northern Part) Iron Ore Mine belonging to M/s Tata Steel Limited in light of the existing Metalliferous Mines Regulations, 1961 and DGMS (Tech) Circular 03 of 2020.

CSIR-CIMFR took up the work of scientific study and carried out field investigation, geo-mechanical testing of pit and dump materials. Available geo-mechanical strength data were also considered in the process of scientific study and design. The outcome of scientific study for pit and dump slope design along with appropriate recommendations for ensuring safety and stability of proposed Pit and OB dump have been presented in this report.

LOCATION & LITHOLOGY

Kalamang West (Northern Part) Iron Ore Mine is situated at Kalamang & Ghodabudhani village in Koida Tehsil of Sundargarh District and Gandhalpada village of Barbil Tehsil in Keonjhar District, Odisha. The mine is present under Geological Survey of India toposheet no. 73G/5. The mine is bounded by the latitudes from 21°56'47.757" to 21°57'32.347" N and longitudes from 85°17'06.658" to 85°17'57.531" E. The nearest town to Kalamang Iron Ore Mine is Koira which is at a distance of about 5.5 km from the mine lease area. National highway, NH-215 is in the NW direction of the mine lease area at a distance of about 1.80 km. Two small rivers namely, Suna Nadi and Karo Nadi are at a distance of about 1.9 km in E and 3.1 km in NW respectively from the mine lease. The nearest railway station is Barbil, which is about 18 km from the mine village in NE direction. The major drainage of the area is contributed by Suna Nadi and Karo Nadi. There is no seasonal nala flowing in the mine lease area.

The various litho types observed are discussed below:

(a) Banded Iron Formation: The Banded Iron Formation is represented by BHJ (Banded Hematite Jasper)/ BHQ (Banded Hematite Quartzite)/ BHC (Banded Hematite Chert), inter-bedded black or green shale and banded ferruginous chert, BHJ occurs in isolated pockets and is highly brecciated.

(b) Ferruginous Shale: The lower shale is brownish in colour and very often contains intercalated bands of chert. The upper shale contains several unmappable units such as carbonaceous shale, banded shale, sandy claystone, shales and mudstones etc. The brownish red coloured banded shale units also include inter-bands of BIF.

(c) Iron Ore: The thinly laminated, Hematite ore bodies exposed in the valley area

are very often laterised near the surface. At places, the iron ore, mostly Hard laminated Ore (HLO) is partly and heavily laterised develops the laterised iron ore/ laterised HLO. Extensive area is covered by fragmentary ore.

(d) Laterites: The laterite has developed mostly over the shale unit of the area and depending upon the composition of shale, different types of laterites have developed.

(e) Alluvial Soil: The low-lying areas, valley, nala etc. are filled up with alluvial soil. It is reddish brown in colour in most of the covered area.

PHYSIOGRAPHY, DRAINAGE & RAINFALL

The area is a highly rugged terrain with elongated hills trending in ENE-WSW direction, low mounds and narrow valleys. The highest elevation is 687m above MSL forms the ridge and the lowest elevation is 584 m above MSL, which forms the valley floor in this block.

A dendritic type of drainage pattern is generally displayed by the area. Because of the hilly topography, there is only one seasonal drainage channel found in the western part of the area. Suna nadi is a perennial river flowing from South to North outside the area at a distance of 2 km towards South-East and it becomes West-East from Malda and debouch into river Baitarani. The drainage channel originating in the western part of the area traverses through the area towards South.

The Sundergarh district have sub-tropical climate characterized by hot and dry summer, cold winter and rainfall in monsoon. The winter season extends from November till the end of February, which is followed by summer season from March to the middle of June, and rainy season from middle of June to middle of October. During summer months the maximum temperature raises up to 43° C and May is the hottest month. December is the coldest month of the year when the average daily temperature drops down to 8° C. Relative humidity is around 60-70% throughout the year. The highest and lowest monthly mean relative humidity is recorded as 97% in December and 26% in April. Average annual rainfall is 1535 mm. About 80% of the total rainfall is received during the period from June to September. On an average there are 79 rainy days in a year.

GEOLOGY AND STRUCTURE

Regional Geology

As per the revised mining plan provided by the mine management, Kalamang Iron

Ore Mine is a part of the Bonai-Kendujhar belt of Sundargarh and Kendujhar districts. The feebly metamorphosed Precambrian volcano-sedimentary rocks exposed in this belt between the Singhbhum granite on the east and Bonai granite on the west are classified as “Iron Ore Group” or “Koira Group”. These rocks are disposed in the form of a low northernly plunging “Horse-shoe” shaped synclinorium. The basal formation comprises of gritty sandstone. This is followed by mafic volcanics. The lava grades into purple colour tuffaceous shale conformably towards the upper part and is described as ‘Lower Shale Formation’. The lower shale passes into the “Banded Iron Formation”. The “Banded Iron Formation” is represented by BHJ/BHQ/BMQ, inter-bedded black or green shale and banded ferruginous chart. The “Banded Iron Formation” is overlain by the “Upper Shale Formation” comprising of thick sequence of tuffaceous purple, white and buff coloured shale, black shale, banded ferruginous shale with inter-bedded chart and BHJ/BHQ/BMQ bands and spreading over the entire core of the synclinorium. A younger sequence of conglomerate and sandstone described as Kolhan Group exposed on the northern and north-eastern part of the belt unconformably overlie the Koira Group of rocks. The iron ore bodies associated with the “Upper Shale Formation”, occur at much lower topgraphic elevation (450-650m) within the core of the synclinorium compared to the major iron ore deposits belonging to the “Banded Iron Formation” and occurring at the ridge tops (750-950m). The regional stratigraphic sequence of South Singhbhum & Bonai area is shown in Table 1.

Table 1: Stratigraphic Succession of South Singhbhum and Bonai Area

Group/Formation	**Lithology**
Kolhan Group	Sandstone, Conglomerate, Breccia
----------Unconformity----------	
Mixed Facies Formation	Basic Lava, tuffs and tuffites of Volcanic facies Iron, Manganese, lenses of Iron formation, chert, small dolomite patches of chemical facies, Minor lenses of sandy and silty shale of clastic facies
Banded Shale Formation	Banded shale member Black shale member Black shale-chert member
Koira Group	
Banded Iron Formation	Finely banded Jaspilite member

	Coarsely banded Jaspilite member
Volcanic Formation	Tuffaceous shale
	Basic lava
	Basal sandstone, Gritty sandstone, Iron Conglomeratic at places with inter-bedded lava at top

----------Unconformity----------

Singhbhum Granite with enclaves of older meta-basic and meta-sedimentary rocks.

Local Geology

The local stratigraphic succession is shown in Table 2.

Table 2: Stratigraphic Succession of Kalamang West Iron Ore Mine

Group/ Formation	**Lithology**
Recent	Soil/ Alluvium cover
Cenozoic	Laterites (Fe-Laterite)
Upper Shale Fromation	Ferruginous Shale Unit: Shale of different coloration like pink, cream and yellow, variegated with inter beds of Iron ore Iron Ore Unit: powdery ore, soft laminated Ore (SLO) and Hard laminated Ore/ Lateritised Hard Laminated Ore with shal intercalation Shale (mainly yellowish limonitized variegated/ cherty/ tuffaceous Shale)
BIF Formation	BIF (BHJ/BHQ/BHC and chert), coarsely banded Jaspellite followed up by finely banded Jaspellite.

The various litho types observed in the course of large scale and detailed mapping in the area are BHJ, ferruginous shale, banded shale, Iron ore, lateralized hard laminated ore, laterite/ Fe-laterite, float ore and soil.

Banded Iron Formation

The 'Banded Iron Formation' is represented by BHJ (Banded Hematite Jasper)/BHQ (Banded Hematite Quartzite)/ BHC (Banded Hematite Chert), inter- bedded black or green shale and banded ferruginous chert. The BHJ/BHQ mostly exposed south of the present area serve as an important marker horizon. Major Iron ore bodies are closely associated with these litho-units. Megascopically BHJ/BHQ comprises alternate bands (laminations less than 5mm thick) of hematite and dark brown to red jasper/ white or grey quartzite. near Kalamanga village, BHJ in isolated pockets and is highly brecciated, ferrugenised with presence of

numerous thin quartz veins. BHJ bands within the synclinal valley are exposed around Gandalpada village. They are discontinuously exposed along strike for a maximum length of 100m in a single outcrop. The BHQ bands in the valley area are affected by shearing showing unevenness of the jasper bands. Megascopically, the individual jasper bands /laminations are seen to be much thicker as compared to that of the Iron oxide rich bands / laminations within the BHJ. The jasper contains small discrete aggregates of quartz, opaque grains and ferruginous materials. The quartz occurs as anhedral to subhedral grains. Hematite forms anhedral grains and masses.

Ferruginous Shale (Fe- shale)

It is represented by a finely laminated rock having varied shades of color ranging from white, maroon, dark gray, brownish and purple to green etc. The coloration of the shale is largely dependent on the mineral composition. It is mostly composed of clayey micaceous minerals mainly sericite and occasional presence of biotite along the fracture or slip plane, with lenses of chert. The lower shale is brownish in color and rich in Iron and very often contains intercalated bands of chert. The upper shale contains several unmappable units such as carbonaceous shale, banded shale, sandy claystone, shales and mudstones etc. The brownish red coloured ferruginous and banded shale units also include inter-bands of BIF. Most of the area containing this unit is lateritised extensively. In Kalamang area, laterite is mostly rich in Iron.

Iron Ore

The thinly laminated, hematitic ore bodies exposed in the area are very often lateralized near surface. However, in-situ boulder outcrops of hard and soft laminated, massive ores are found at the identified blocks. ‘Canga’ zones occur near to the Iron ore bodies within the hard lateritised duricrust and contain mostly Iron ore floats. At places, the Iron, mostly Hard laminated Ore (HLO) is partly or heavily lateritised developing the lateritised Iron ore/ Latertised HLO. Though at places the discontinuous in-situ ore body is observed, extensive part of the area is covered by fragmentary ore.

Laterite

South-western, South-eastern and north-western part of the area is covered by laterite of various types. The laterite has developed mostly over the shale unit of the area and depending upon the composition of the shale, different types of laterite have developed. Lateralization has also taken place over the Iron ore body also. Ferruginous laterite occupies

mostly observed in the area and is wide-spread.

Alluvial Soil

The low-lying areas are filled up with alluvial soil. It is ferruginous in nature and reddish brown in color in most of the covered area; but grey to light brown colored soil is also observed over the cultivable land. In most of the area, the soil is moderately coarse in nature whereas it is loamy in the cultivation land. Since the area is devoid of any perennial nala or river, the soil has been deposited in the valley area mostly from the low order nala or from the slope wash of the nearby hillock occupied by the Iron Ore Group of rocks. Thus, it has been derived mainly from is upper reach source rocks like BIF, Iron ferruginous shale ore laterite, which controls the characteristics of the soil.

The geological surface plan of Kalamang West (Northern Part) Iron Ore Mine has been shown in Figure 1.

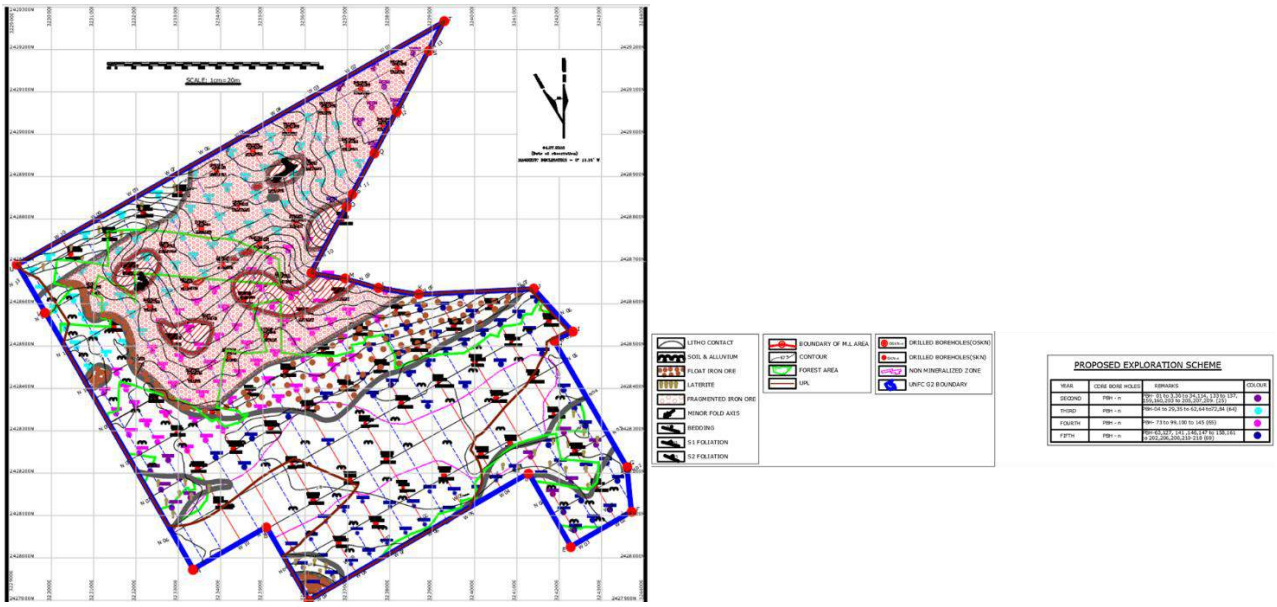


Fig. 1: Geological surface plan of Kalamang West (Northern Part) Iron Ore Mine

METHOD OF MINING

As per the approved mining plan provided by the mine management and field investigation, it has been found that the area has remained completely virgin so far and no mining operations was carried out in the past. In consideration of the targeted production level, fully mechanized opencast mining has been proposed in the approved mining plan with HEMM and deep-hole drilling. The mine plan has been proposed keeping in mind the objective of exploiting the highly laminated ore and fragment ore taking into consideration

the ease in approachability of the ore body and disposal of ore and waste.

In the plan period from 2023-24 to 2026-2027, about 9150000 tons of saleable iron ore shall be produced. As the mining activity in the lease area has to be initiated for the first-time, e.g., scrapping of soil and alluvium, cutting of trees/bushes, making of access roads, infrastructure development etc. will be given preference. After the development of access road to the targeted area a box cut will be opened and thereafter, it will be expanded both laterally and depth ward to fulfill the required production target.

Mining machineries like Dumper, Tipper, Excavator, Front End Loader, Dozer, DTH (Rotary-Percussion), top Hammer will be employed in the mine. Fully mechanized method of mining will be adopted on three shifts per day with an effective shift timing of 6 hrs. For processing of the mineral produced, a stationary crusher with screening facility of adequate capacity will be installed.

As per the approved mining plan provided by the mine management, the individual bench faces will be kept nearly at 80° whereas the overall quarry slope angle will be maintained at less than 45° from the horizontal. Iron ore will be loosened through deep hole drilling & blasting. Slurry explosive (large diameter) will be used for blasting purpose in the mines. The ROM will be fed to a crushing/screening plant. The haul road used for movement of machineries and for transportation will be maintained at suitable gradient of preferably less than 1 in 16. Inter-bench ramps have been planned to facilitate movement of equipment. The approach roads and ramps along with main access road will be regularly graded and compacted using dozers to avoid formation of pot holes. As provided by the mine management, the development plan for Kalamang West (Northern Part) Iron Ore Mine up to the year 2026-27 is shown in Figure 2. Different sections along the proposed ultimate pit has been provided by the mine management. These sections have been shown in Figures 3 to 12. Mine management also provided the section of temporary dump to study the impact of temporary dump on the overall stability of the pit as per 5 year working plan (up to development year 2026-27), and has been shown in Figure 13.

Excavator of capacity up to 4 m^3 and dumpers of up to 50-ton capacity will be engaged for excavation and transportation of mineral. Waste generated from the quarry will be stacked on the proposed dump. All the mining activities like deep hole drilling, blasting, excavation, loading and transportation will be carried out by using heavy earth-moving

machineries. Keeping in view the above aspects, the proposed method of mining justifies coming under category A-FM (Fully mechanized).

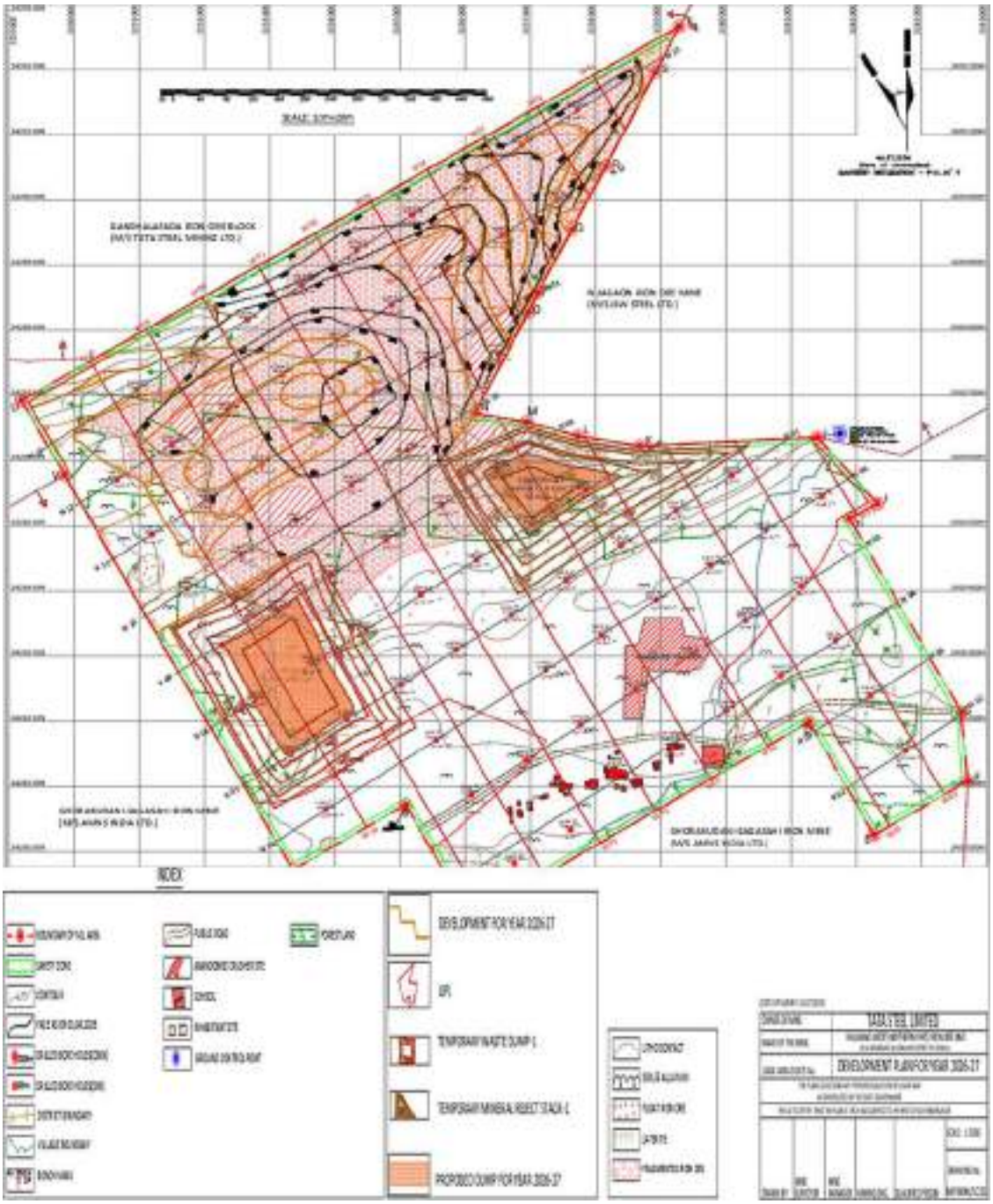


Fig. 2: Development plan up to year 2026-27 of Kalamang West (Northern Part) Iron Ore Mine

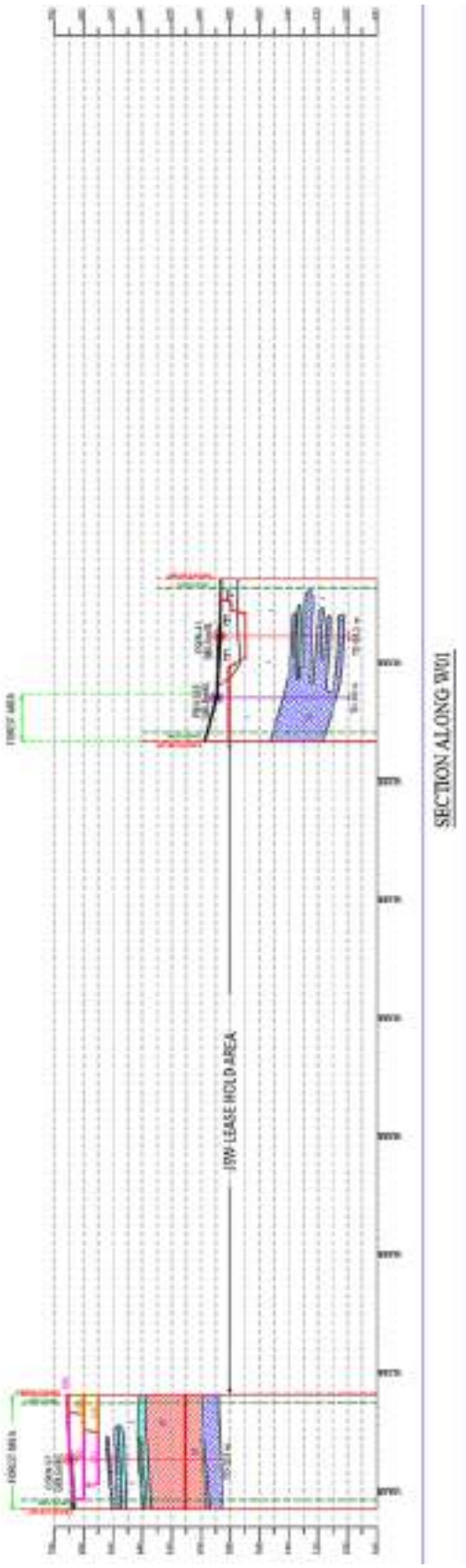


Fig. 3: Section Along W01 of Kalamang West (Northern Part) Iron Ore Mine

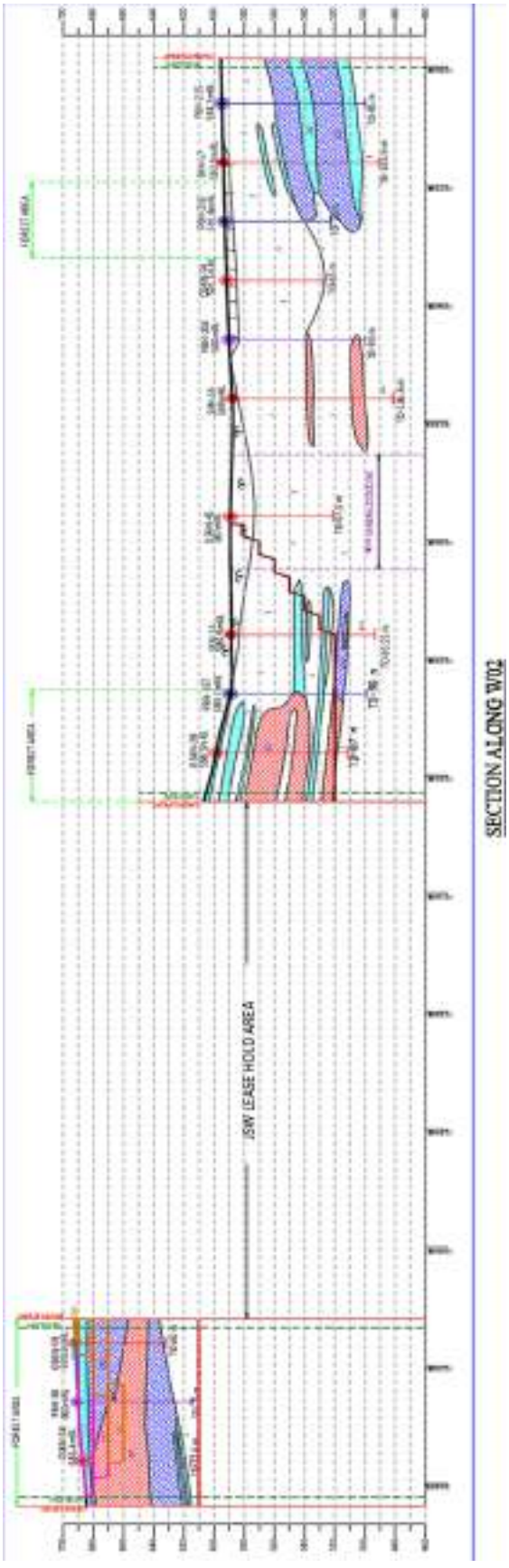


Fig. 4: Section Along W02 of Kalamang West (Northern Part) Iron Ore Mine

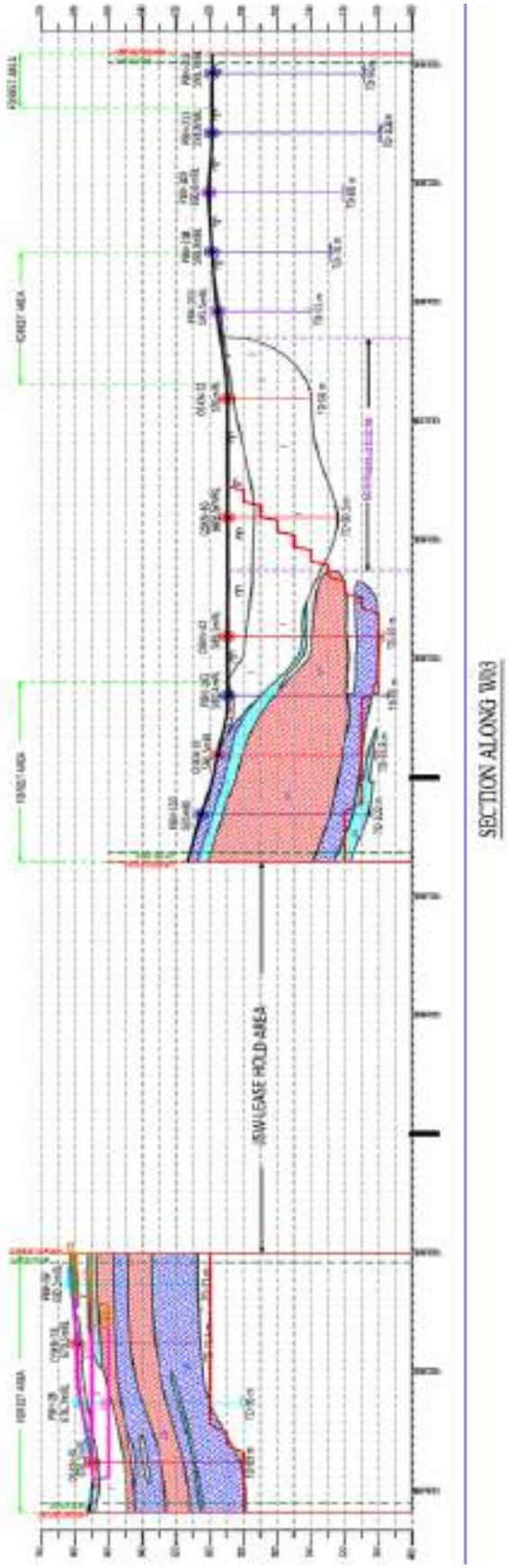


Fig. 5: Section Along W03 of Kalamang West (Northern Part) Iron Ore Mine

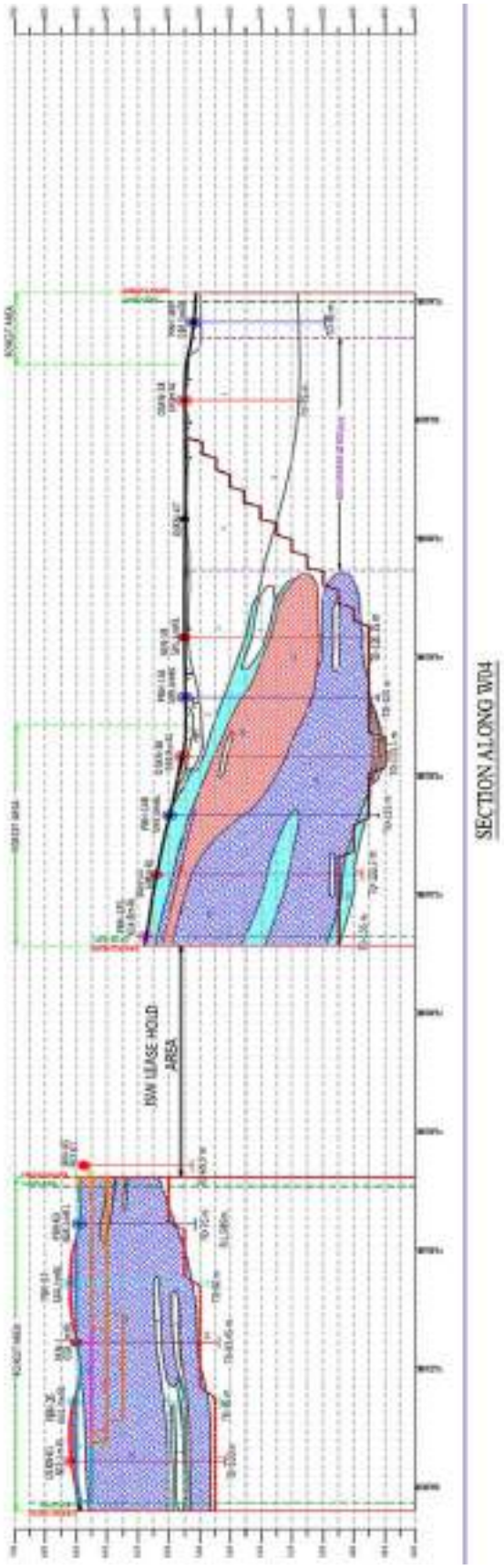


Fig. 6: Section Along W04 of Kalamang West (Northern Part) Iron Ore Mine

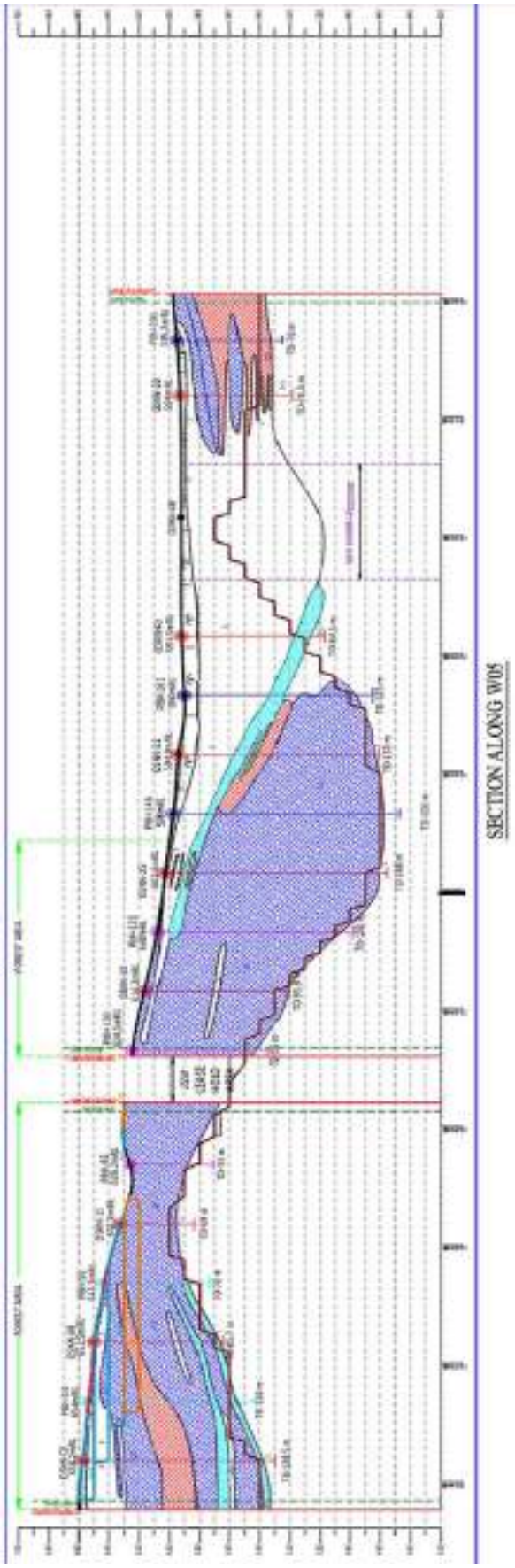


Fig. 7: Section Along W05 of Kalamang West (Northern Part) Iron Ore Mine

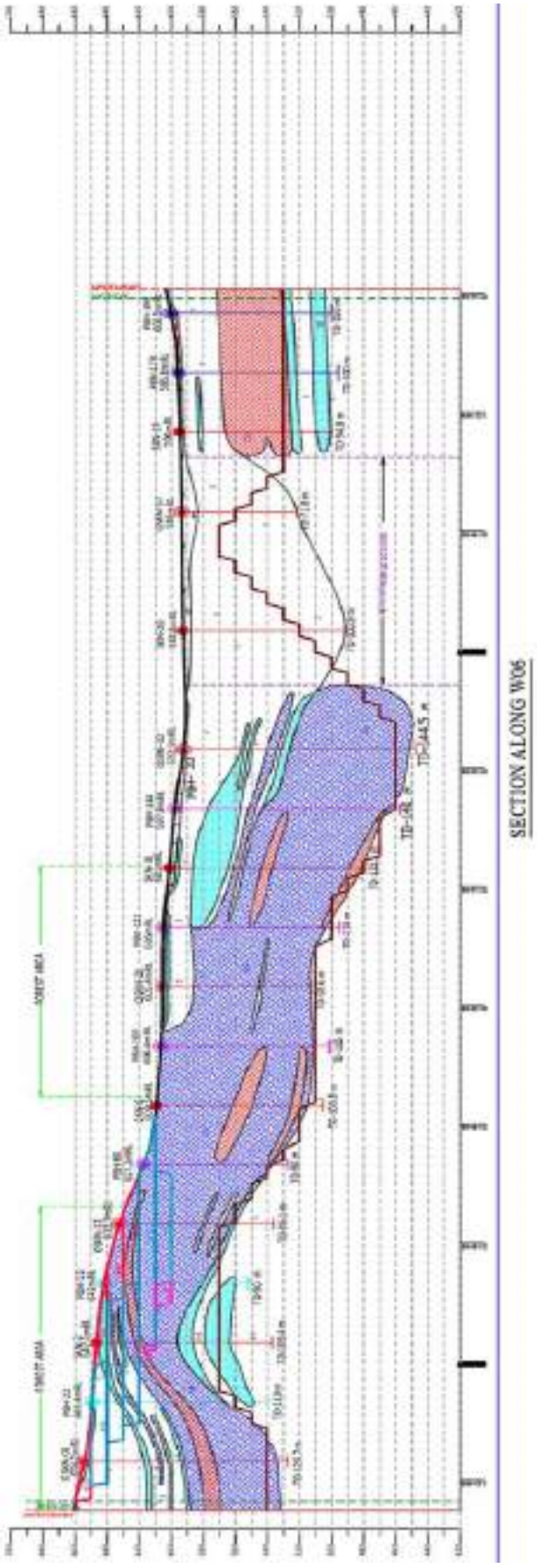


Fig. 8: Section Along W06 of Kalamang West (Northern Part) Iron Ore Mine

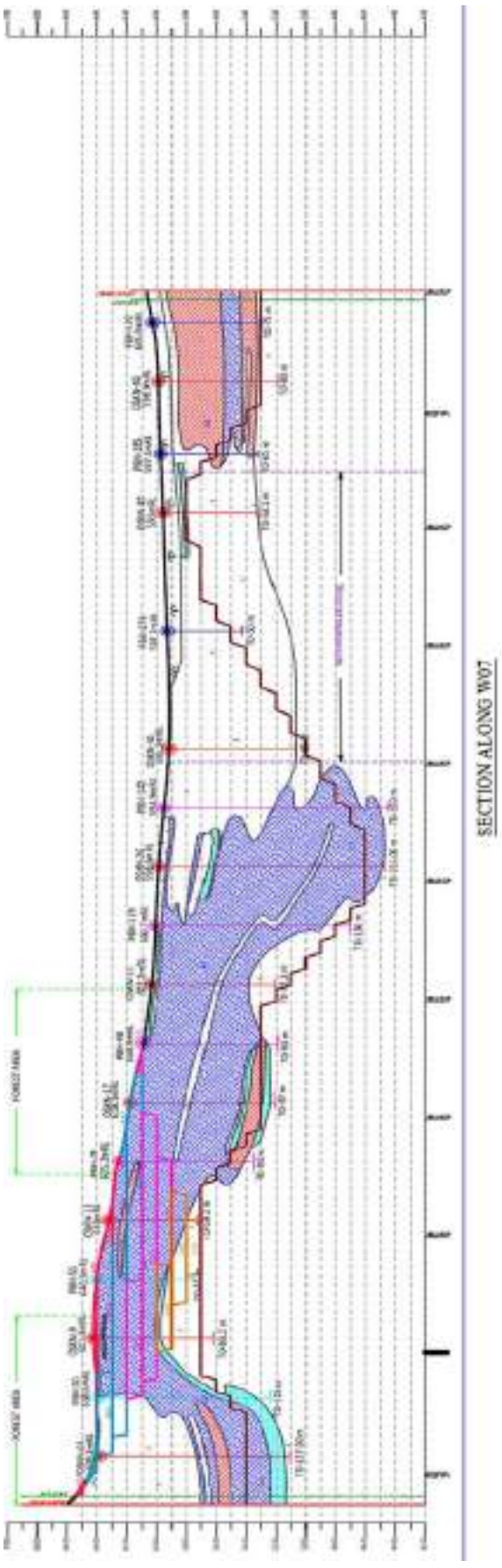


Fig. 9: Section Along W07 of Kalamang West (Northern Part) Iron Ore Mine

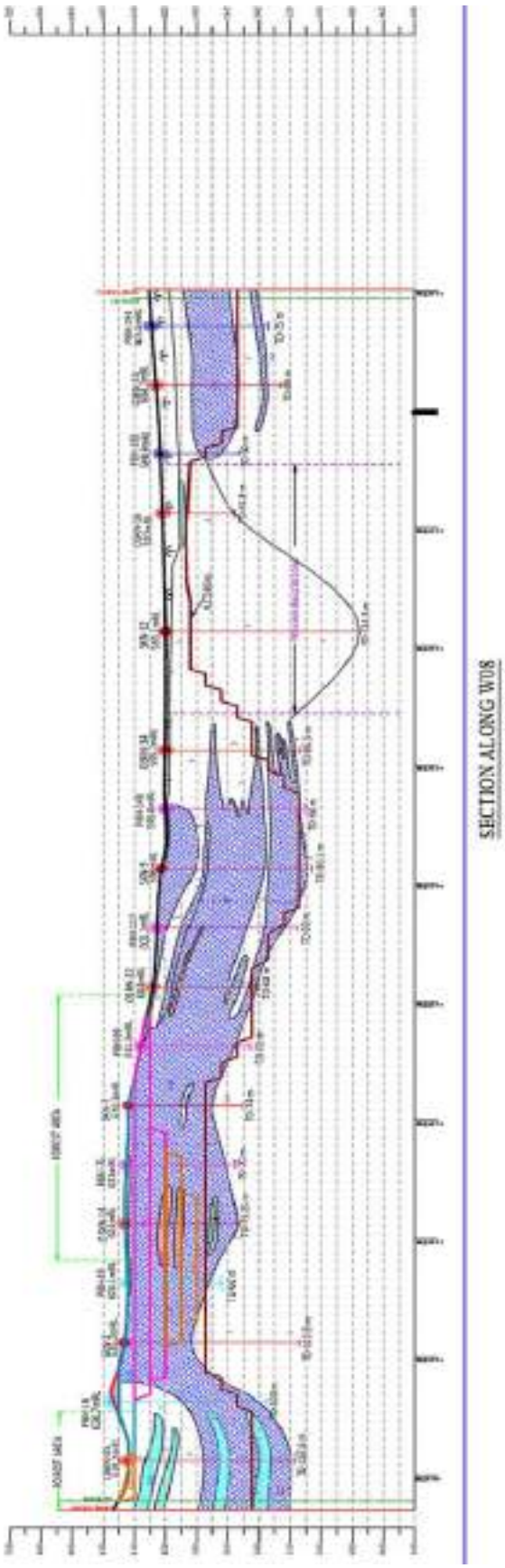


Fig. 10: Section Along W08 of Kalamang West (Northern Part) Iron Ore Mine

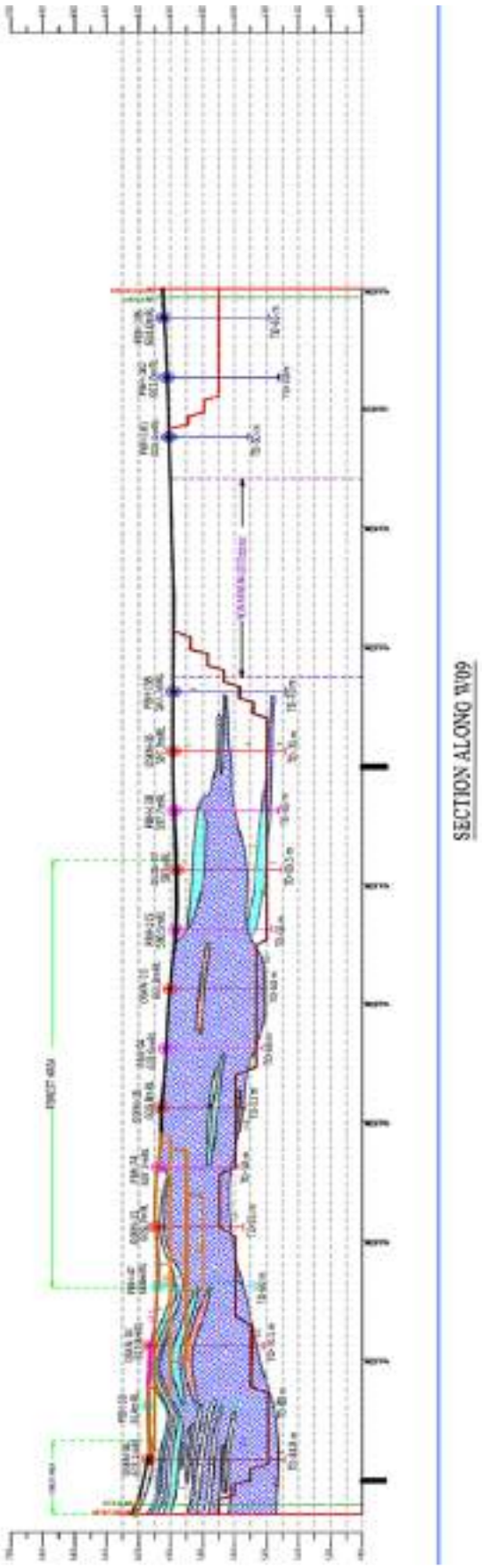


Fig. 11: Section Along W09 of Kalamang West (Northern Part) Iron Ore Mine

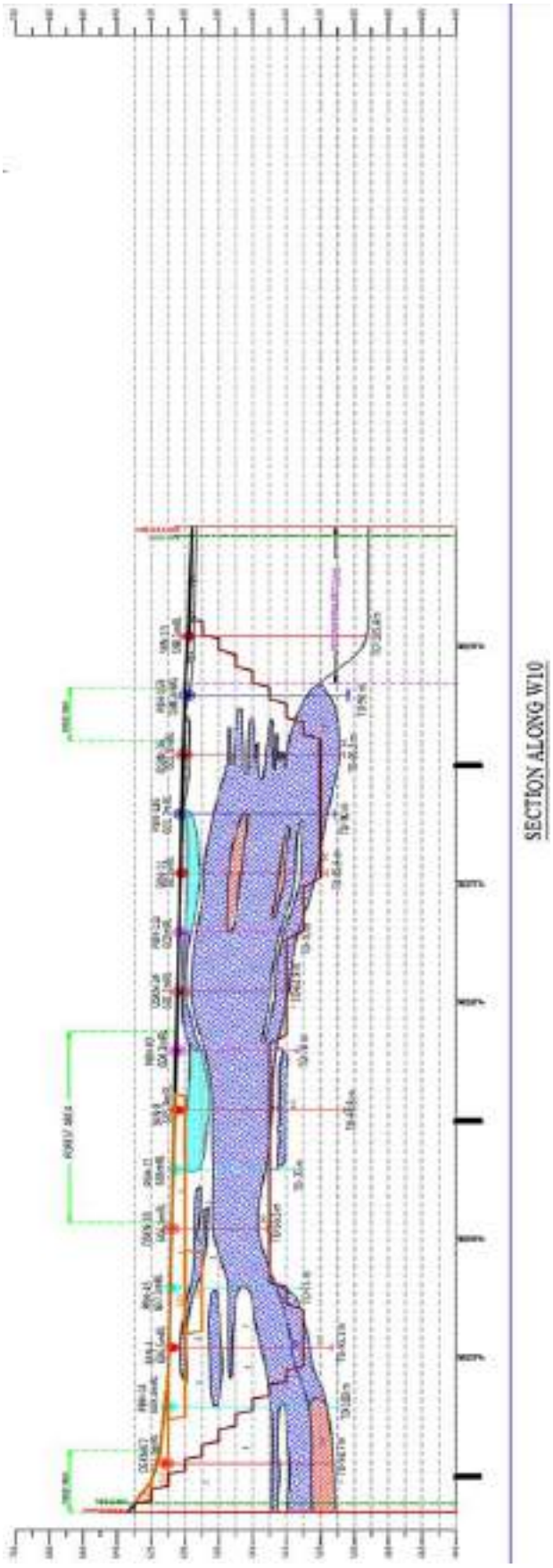


Fig. 12: Section Along W10 of Kalamang West (Northern Part) Iron Ore Mine

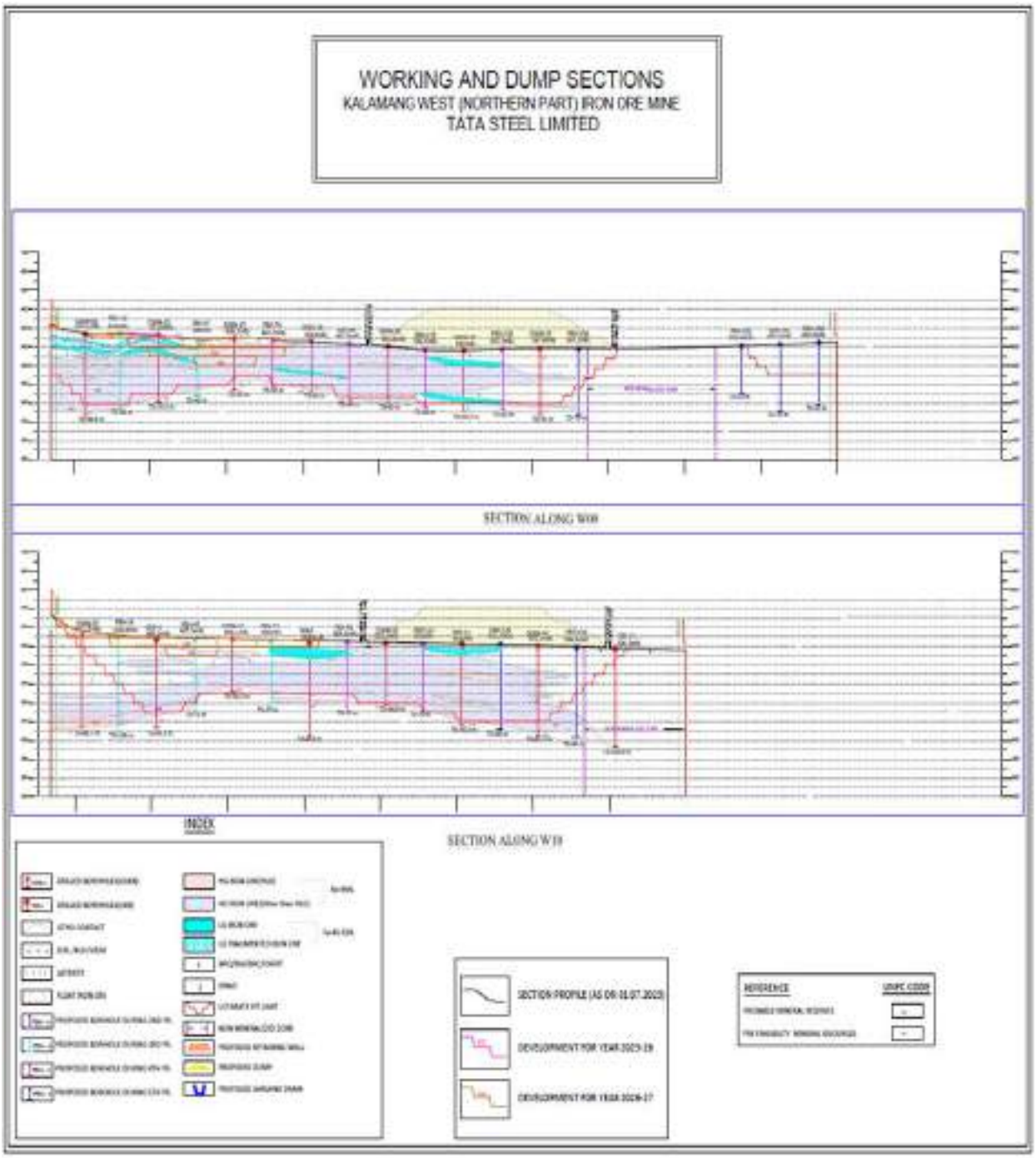


Fig. 13: Section for temporary dumps of Kalamang West (Northern Part) Iron Ore Mine

From the surface plan in Figure 2 and sections in Figures 3 to 12, the lowest and highest mRL of the ultimate pit profile along different sections of Kalamang West (Northern Part) Iron Ore Mine have been listed in Table 3.

Table 3: Top and Bottom RL of ultimate pit profile of Kalamang West (Northern Part) Iron Ore Mine

Section No.	Figure No.	Proposed Pit		
		Top RL	Bottom RL	Difference
W 01	3	610	570	40
W 02	4	610	520	90
W 03	5	600	500	100
W 04	6	600	460	140
W 05	7	600	460	140
W 06	8	570	460	110
W 07	9	580	460	120
W 08	10	586	514	72
W 09	11	600	540	60
W 10	12	630	520	110

From Table 3 and Figures 3 to 12, it is evident that the top RL of the ultimate pit will be 610 mRL and bottom RL will be 460 mRL. Top RL of 610 mRL and Bottom most RL of 460 mRL is not aligned in the same section, therefore, maximum depth of the proposed ultimate pit is about 140 m, as evident in section W04 and W05 provided by the mine management (Fig. 6 & 7 respectively). Therefore, in this report optimum bench configurations for maximum pit depth of 140 m has been designed. The bench height has been kept constant at 10 m and the width of the bench has been varied to get the desired optimum design of the ultimate pit profile for 140 m depth. It is evident in the geological plan provided by the mine management, that the working benches would be created in a phased manner, where it will encounter iron, shale, BHJ/BHQ. There will be instances where the working benches would be created in a combination of more than one lithology. As per the surface plan provided by the mine management in Figure 2, maximum height of the temporary dump will be 45 m. As shown in section along W-09 and W-10 in Figure 13, the following observation have been made regarding the temporary dump and pit slopes, as shown in Table 4.

Table 4: Details of dump and pit along section W-09 and W-10

Section No.	Maximum depth of the pit along the section	Maximum Dump height along the section	Distance between pit's crest and dump's toe	Remarks
W-09	30	45	100	Distance between pit's crest and dump's toe is more than the dump's height
W-10	30	45	60	

Slope design has been provided by considering all the conditions of lithology present in the mines.

SLOPE STABILITY

The importance of safe, professionally designed and scientifically engineered slopes of the mine and dumps are well known. The benefit of an open pit operation largely depends on the use of the steepest possible slopes for pit and dumps, which should not fail during the intended life. So, the design engineer is faced with the two opposite requirements, stability and steepness, in designing the deep open pit slopes or high and steep overburden dumps.

Steepening the slopes of a mine, thereby reducing the amount of material to be excavated, can save a vast sum of money. Similarly steepening and heightening of overburden dumps with adequate precautionary measures permits high quantity of OB material to be accommodated in less land area for dumping. At the same time excessive steepening may result into slope failure leading to loss of production, extra stripping costs to remove failed material, reforming of benches, rerouting of haul roads and production delays. Directorate of Mines Safety may even close the mine or dumping operation on dump in case unsafe conditions are created. Therefore, it is necessary that a balance between economics and safety should be achieved.

The slope stability department of CSIR-CIMFR is rendering its services for optimum and safe slope design of mines and dumps for different mining companies all over India. During last about 30 years, CIMFR has completed hundreds of slope design and safety monitoring projects in coal and non-coal sectors for pits and dumps.

The stability of the slope primarily depends on the slope geometry and strength properties of the slope materials. Ground water and surface water flow condition also plays a critical role on the stability of dump and pit slopes. The orientation and other properties of discontinuity planes in rock mass with respect to slope face determines the types of failure possible within that slope. Generally, plane, wedge, circular and toppling types of failure occur in rock slopes while in soil slopes and weathered / highly fractured rock slopes circular failure is the main type of failure.

GEO-TECHNICAL PROPERTIES OF PIT AND DUMP

Engineering properties of materials of pit and OB dump will influence the analysis for slope stability. The average value of relevant strength properties, which were determined in the soil and rock mechanics laboratory of CIMFR and subsequently used for slope stability

analyses of the Pit and Dump of Kalamang West (Northern Part) Iron Ore Mine of M/s Tata Steel Limited are summarized in Table 5. The properties were determined on the samples collected from outcrop regions, exposed portions, neighboring mines for estimating the shear strength properties of the materials present in the mine and properties provided in approved mining plan of Kalamang West (Northern Part) Iron Ore Mine. Properties along with sound engineering judgement was used in the process of analyzing and evaluating the stability of pit and OB dump under different geometrical configurations.

Table 5: Geo-Mechanical Properties of Materials of Kalamang West (Northern Part) Iron Ore Mine

Sr. No.	*Lithology*	*Cohesion (kPa)*	*Friction angle (degree)*	*Density (kN/m^3)*	Color Code
1.	BHJ/BHQ	265	33	31.3	
2.	Shale	140	29	22.5	
3.	Iron Ore	165	31	28.4	
4.	Shale + Iron	153	30	25.5	
5.	Shale + BHJ/BHQ	205	30	27.0	
6.	BHJ/BHQ + Iron	210	32	29.9	
7.	Dump Mass	53	21	19.6	

SLOPE STABILITY ANALYSIS

The limit equilibrium method is widely accepted and commonly used design tool in slope engineering. The failure analysis was done by SLIDE software, which is based on limit equilibrium method**.** In this method, it is assumed that sliding occurs when a limit equilibrium condition is reached, i.e., when the resisting forces balance the driving forces. These methods are the most widely accepted and commonly used design methods and they permit a quantification of slope performance with the variations in all the parameters involved in the slope design. The basic idea behind the limit equilibrium approach is to find a state of stress along the failure surface so that the free body, within the slip surface and the free ground surface, is in static equilibrium. This state of stress is known as the mobilized stress, which may not be necessarily the actual state along this surface. This state of stress is then compared with the available strength, i.e., the stress necessary to cause failure along the slip surface.

Limit equilibrium analysis considers the slope performance only at the equilibrium condition between the resisting and disturbing forces for sliding. To represent the slope performance other than the equilibrium condition, it is necessary to have an index and the widely used index used to be factor of safety. Factor of safety is calculated as the ratio of

shear strength to the available shear stress required for equilibrium, integrated through the whole slide. It is assumed to be constant throughout the potentially sliding mass. Due to scatter of test results and the uncertainty of these input parameters, a cut-off value of 1.3 safety factor is recommended for pit slope stability analysis on the basis of the long-term stability (Hoek and Bray, 1981). However, keeping in view the DGMS circular no. 03 of 2020 dated 16-01-2020, optimum design of pit and dumps were worked out with minimum a factor of safety more than 1.5.

Water table within the slope mass and the implementation of different remedial drainage measures and water management measures have been taken into consideration in the process of slope design. It is one of the principles of the open pit design that some localized instability may occur, which will influence a relatively small area especially during monsoon. This is consistent with the mining environment. It should be acknowledged that some clean-up may be required within the pit or dump, particularly after the monsoon season.

Optimum slope design for the ultimate pit profile has been recommended by CSIR-CIMFR keeping in mind the ultimate depth of Kalamang West (Northern Part) Iron Ore Mine of 140 m as shown in Figure 6 and Figure 7. After analyzing the cross sections as shown in figures 3 to 12, it is evident that the benches would be created in different lithology (for e.g. Iron Ore, Shale, BHJ/BHQ, combination of Shale & Iron Ore, combination of Shale & BHJ/BHQ, combination of BHJ/BHQ & Iron ore), therefore, slope design has been provided by considering all the six lithologies / combination of lithologies. Height of all benches has been kept fixed at 10 m for the desired depth of pit. Considering the slope angle of benches at 70-degree, bench width has been varied to find out the optimum pit slope profile having minimum 1.50 factor of safety. As mentioned in Figure 14, the height of the temporary dump will be 45 m. The bench height of the temporary dump has been fixed at 15 m. The analysis of the ultimate dump has been shown in Figure 20. In order to assess the impact of the temporary dump that will be created in the mine on overall slope stability of the pit, mine management was requested to submit the sections showing the position of the working pit as well as dump as per the 5-year working plan (up to development year 2026-27, as shown in Figure 13). The observations regarding the relative position of dump and pit has been shown in Table 4. The Draft Metalliferous Mines Regulations, 2019 published on February 20, 2020 have specified in Regulation 118(5) that the toe of a spoil bank (i.e. waste dump, subgrade stack etc.) shall not extend to any point within a distance equal to height of the spoil bank from a mine opening. Observations that are made from Figure 13 and recorded in Table 4

states that the minimum distance between the pit's crest and dump's toe is more than the dump's height along both section and thus meets the above-mentioned requirement also. Moreover, depth of the working pit near the temporary dump is only 30 m and thus it can be said there will no impact of temporary dump on the overall slope stability of pit and/or dump. Result of the slope stability analysis have been shown in Figures 14 to 20 and factor of safety obtained after slope stability analysis have been shown in Table 6.

Table 6: Stability Analysis of Ultimate Pit Slopes of Kalamang West (Northern Part) Iron Ore Mine

Profile Description	FOS	Figure No.
Ultimate slope design considering shale as the only geological material present for 140 m depth with bench width of 12.5 m.	1.51	14
Ultimate slope design considering iron ore as the only geological material present for 140 m depth with bench width of 11.5 m.	1.51	15
Ultimate slope design considering BHJ/BHQ as the only geological material present for 140 m depth with bench width of 8 m.	1.51	16
Ultimate slope design considering the mixture of shale and iron as the only geological material present for 140 m depth with bench width of 12 m.	1.51	17
Ultimate slope design considering the mixture of shale and BHJ/BHQ as the only geological material present for 140 m depth with bench width of 10.5 m.	1.52	18
Ultimate slope design considering the mixture of BHJ/BHQ and Iron as the only geological material present for 140 m depth with bench width of 10 m.	1.53	19
Ultimate dump slope design recommended by CSIR-CIMFR for 43 m dump height and 15 m bench width.	1.69	20

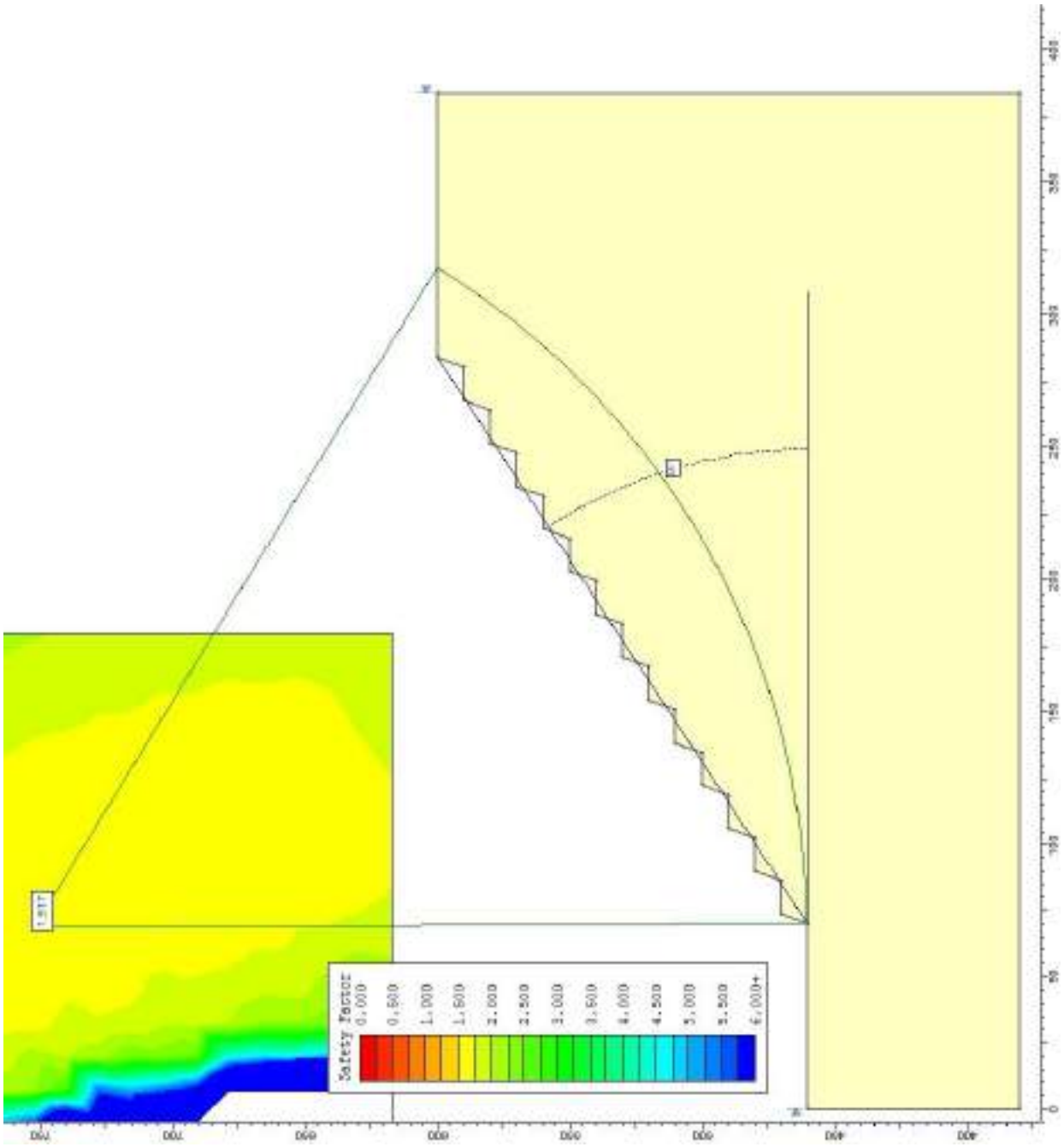


Fig. 14: Ultimate slope design considering shale as the only geological material present for 140 m depth.

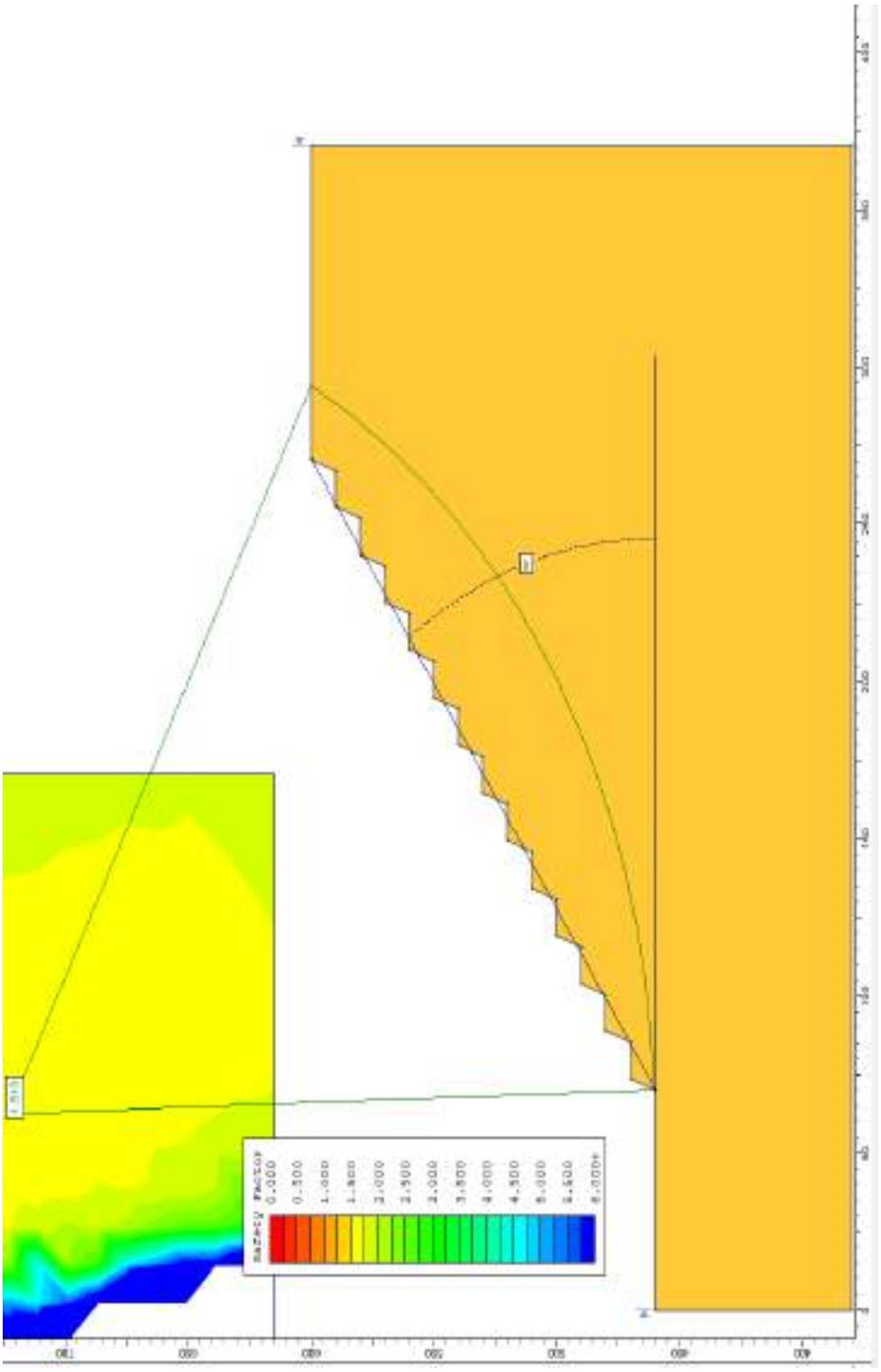


Fig. 15: Ultimate slope design considering iron as the only geological material present for 140 m depth.

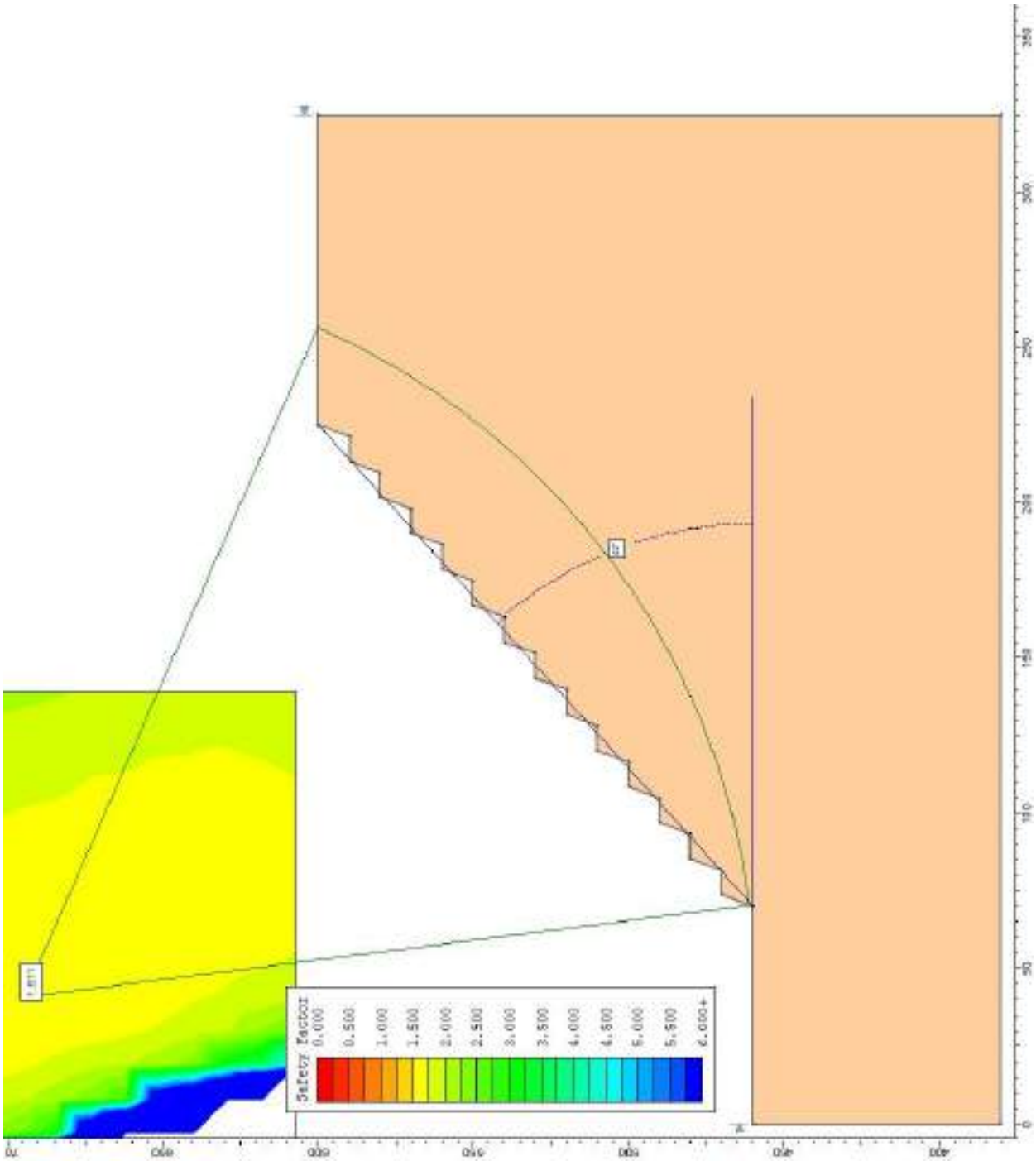


Fig. 16: Ultimate slope design considering BHJ/BHQ as the only geological material present for 140 m depth

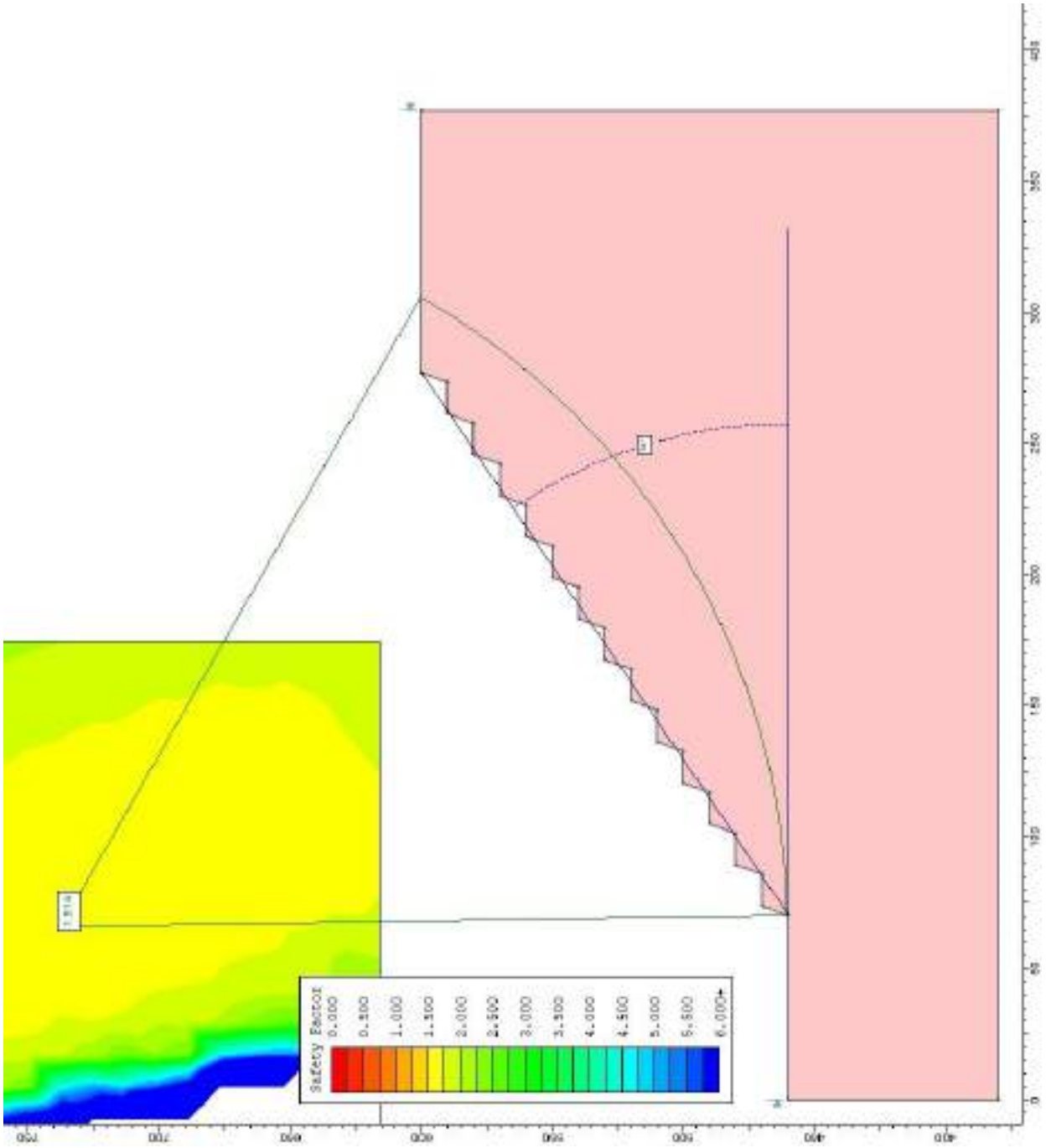


Fig. 17: Ultimate slope design considering combination of shale and iron as the only geological material present for 140 m depth

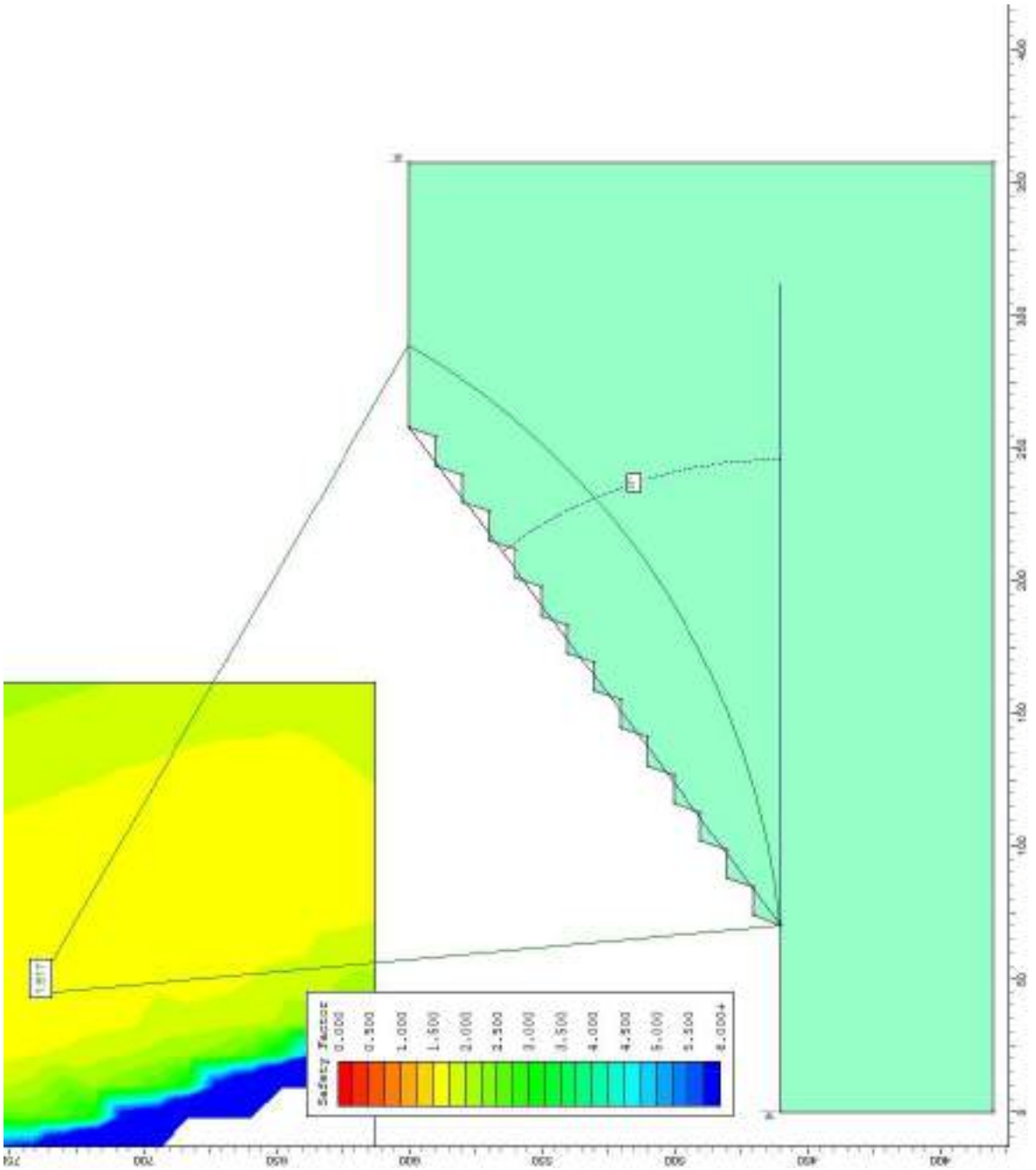


Fig. 18: Ultimate slope design considering combination of shale and BHJ/BHQ as the only geological material present for 140 m depth

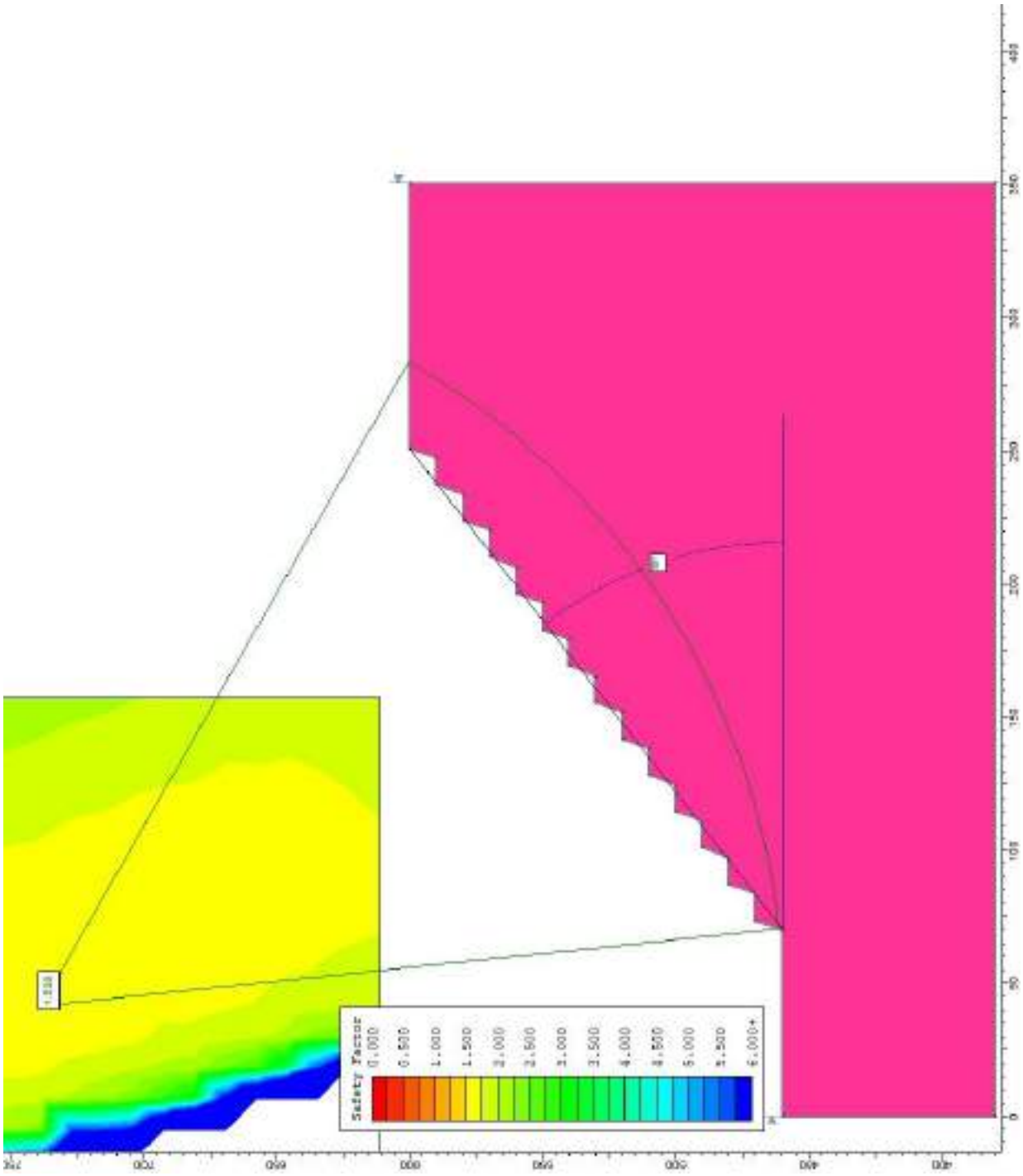


Fig. 19: Ultimate slope design considering combination of BHJ/BHQ and iron as the only geological material present for 140 m depth

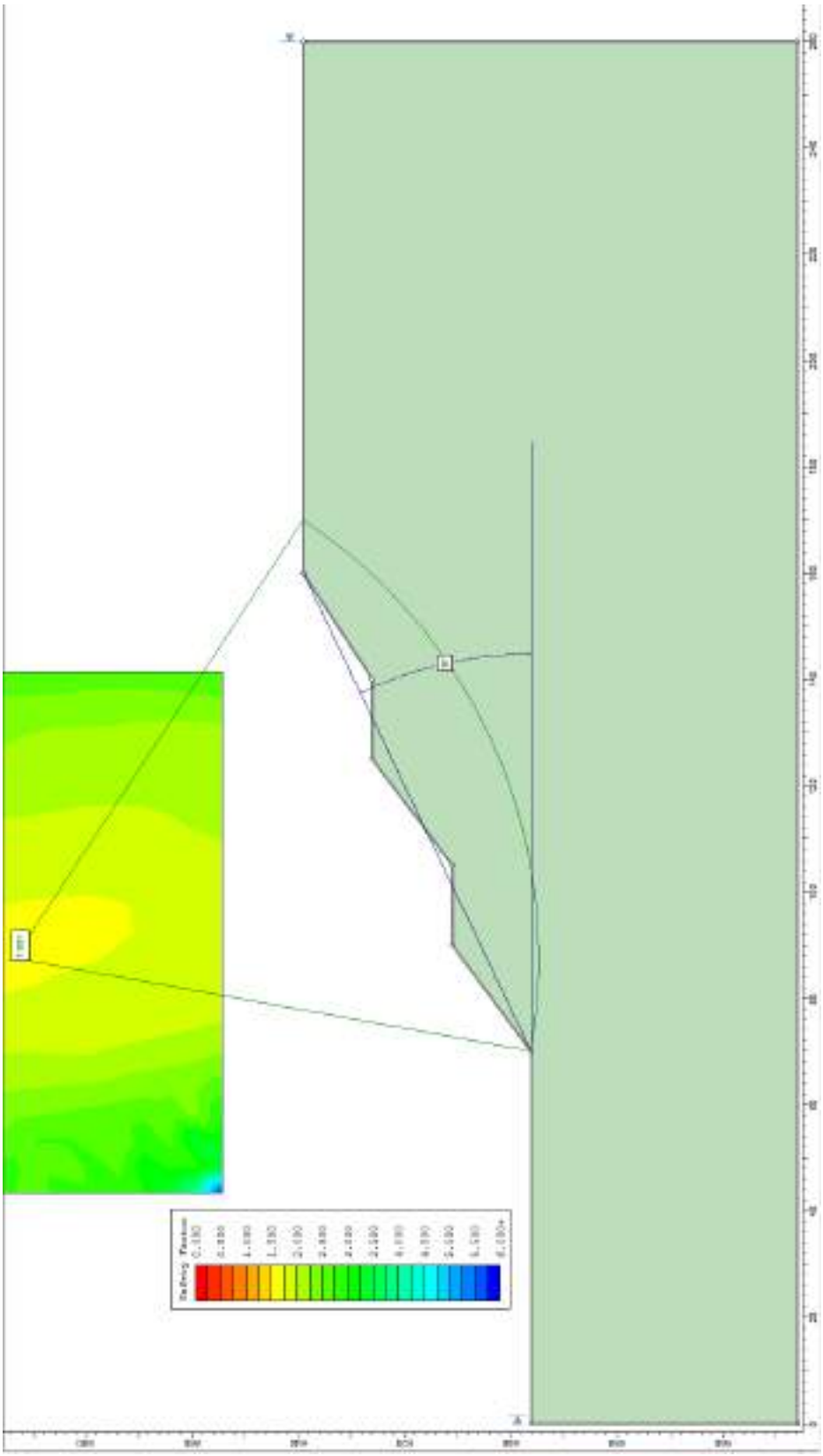


Fig. 20: Ultimate dump slope design of Kalamang West (Northern Part) Iron Ore Mine

Based on the analysis presented in From Table 6 and Figures 14 to 19, benching pattern of optimum design of ultimate pit slopes of Kalamang West (Northern Part) Iron Ore

Mine upto 140 m depth has been given in Table 7.

Table 7: Optimum Design of Ultimate Pit Slopes of Kalamang West (Northern Part) Iron Ore Mine up to 140 m depth

Maximum depth of pit at ultimate stage	Geo-mining conditions	Bench Parameters		
		Maximum bench height (m)	**Minimum exposed** bench width (m)	**Maximum** bench angle (°)
140m	Benches in shale	10	12.5	70
	Benches in Iron	10	11.5	70
	Benches in BHJ/BHQ	10	8.0	70
	Benches in shale & Iron	10	12.0	70
	Benches in shale & BHJ/BHQ	10	10.5	70
	Benches in BHJ/BHQ & Iron	10	10.0	70

Based on the analysis presented in Table 6 and Figure 20, benching pattern of optimum design of temporary dump of Kalamang West (Northern Part) has been given in Table 8.

Table 8: Optimum Design of Temporary Dump Slopes of Kalamang West (Northern Part) Iron Ore Mine for 43 m Height

Maximum height of the temporary dump	**Bench Parameters**		
	Maximum bench height (m)	**Minimum exposed** bench width (m)	Maximum bench angle (°)
45	15	15	37

From Figures 14 to 20, it is evident that the factor of safety of ultimate pit profile and dump profile as listed in Table 6 is varying between 1.51 to 1.69 which are more than the minimum desired value of 1.50 as per the DGMS circular no. 03 of 2020, dated 16-01-2020. Thus, they can be considered safe and stable from slope stability point of view.

Considering the prevailing conditions and precautions being taken by the mine management, most likely condition of the pit/ dump slopes was adjudged to be drained condition. The stability analyses for ultimate pit slopes were done with a consideration of machine cutting /controlled blasting, drained groundwater condition, proper drainage for rainwater and slope monitoring. Under drained condition, dump slopes are likely to be stable

with available shear strength of the slope material. If the pit /dump slopes are kept in undrained condition then the factor of safety would reduce substantially. In order to avoid undrained condition, attention must be paid to avoid uncontrolled entry of rain / surface water in the pit / dump mass by providing suitable drainage in and around the mine and dump, otherwise overall factor of safety of dump may reduce. If any observance is made for the occurrence of adverse condition, then this slope angle has to be corrected accordingly.

The analysis shows that the large-scale failure is unlikely but small-scale failure cannot be completely ruled out. The main philosophy in open pit and dump design is to avoid large-scale failure. Localized bench failure does not cause great concern as it can be arrested on the lower benches, which can be cleaned. So, machinery access on the benches must be maintained.

DRAINAGE AND WATER MANAGEMENT

From the slope stability analysis presented in this report, it is evident that the recommended ultimate profiles of Kalamang West (Northern Part) Iron Ore Mine are likely to be safe in drained geo-mining condition. The slopes may have reduced factor of safety in undrained condition or under changed dumping configurations. Therefore, mine management has to take all effective measures considering existing regulations and geo-mining conditions to keep the pit profile in drained conditions. In order to keep the pit in drained condition, attention must be paid to avoid entry of rain / surface water in the slope by providing suitable drainage in and around the pit and dumps.

The rainwater of the adjacent catchments area should not be allowed to enter in to pit in an uncontrolled way. It causes erosion and deep gullies in the weak formations, which in turn may result in to failure in due course of time. So, the rainwater of the catchments area should be directed away from the pit. The excavated pit must be provided with an effective garland drain/ bund depending upon the topography to check the entry of rainwater in to the pit during the monsoon. Similarly, all around the periphery of dump, a collector drain/ bund should be formed to divert the rainwater away from the dump. The drainage must always be directed away from the pit. All the drains should be kept clear of soil debris and effective for the free flow of water. The discontinuance of the pre- monsoon preparation at any location will jeopardize the whole effort of maintaining the designed slopes.

The benches should be provided with bench drains to collect the rainwater. The flowing rainwater should not be allowed to flow down to lower benches in an uncontrolled manner. The slope of the upper surface/ benches should be well graded so that the rainwater goes away from the quarry. At few locations it may not be possible to divert the rain/ seepage water away from the pit, in that case a proper drain pattern should be developed to channelize the water into the pit sump. The water should not be allowed to enter into the pit from many channels or left uncontrolled. By guiding the flow of water in a fixed channel erosion/ failure of soil/ clays can be checked. The unchecked erosion may lead to failure in these soil slopes in due course.

Every attempt should be made to make a proper gradient along the benches, top and floor of the dump. The dump top should be properly levelled with a slope to avoid water retention on dump top/ dump benches and to prevent the rainwater flowing along slope. The upper surface of the mine and dump should be properly graded to divert the run-off of rainwater away from the pit and dump. The proper leveling and grading of benches should be done for quick run-off of rainwater. All benches of external dump should have an effective toe drain. These drains should be interconnected to drain out the rainwater away from the pit.

The dumps should be provided with all necessary protective features wherever required such as toe wall and garland drain to arrest any surface run offs. Afforestation on the dump slopes should be done for stabilizing the dump slopes, once a part of the dump slope become inactive. The terraces should be designed so that rain water is drained out of the dump and there is no accumulation of rain water. The rain water should get channelized to the toe wall and garland drain provided at the base of the dump.

If two or more benches of pit or dumps are made steeper at any level in any part then it may decrease factor of safety. Although, the overall slope angle may be quite low but the steeper slope angle of two or more benches may increase the stress at the toe of relatively steeper part of the slope, which may cause failure. Two or three such small failures may cause a big failure. So, benching should be done properly at each stage of pit and dump formation.

The open cracks, whenever develop, in the partially consolidated new dump mass should be consolidated with the help of dozer/ compactor followed by proper leveling of the benches. It will help to consolidate the dumped material and will minimize infiltration of water inside dumps.

Because of steep slopes and well-connected hilly streams, the run off rate is very high. The rainwater of the adjacent catchments area should not be allowed to enter in the dump in an uncontrolled way. The surplus water flowing down the sloping surface of the dump remove soil particles from large areas causing small channels. These channels in due course get deepen and widen during each succeeding rain and finally integrate into larger channels called gullies, which sometimes bring instability to the dumps. So, the rainwater of the catchments area should be directed away from the dump. A bund/ garland drain, depending up on the topography of the area, should be made/ cut all around the toe of dumps to collect run-off of the rainwater before it reaches the dump.

Drains should be properly graded to promote rapid water flow and minimize chances of ponding. The drains should be effectively maintained to divert the drained water away from the dump. If this drainage system is not effectively achieved then the dumps may fail due to increase in saturation at the bottom of the dumps. These drainages should be made to handle even heavy rainfall events. Wherever drains are required for a sufficiently long duration, it should be cemented or lined with geo-membrane to avoid percolation of water into the dump mass. At some locations, if it is not possible to divert the rainwater away from the dumps, the rainwater should be diverted to the pit sump through drains.

During the rainy season, a dedicated team should be deputed to go in and around the mine and dump on daily basis to observe any sign of instability and to see the effectiveness of drain. If any blockage is observed, immediately steps should be taken to make it effective. If any deep tension crack is detected in the dump, the entry of water inside the crack should be checked.

Some part of the waste may be used for making the berms, haul roads, ramps and maintenance of bench floors. Moreover, the waste may also be used as landfill for filling up of low-lying areas and for construction activities within the leasehold boundaries. Efforts should be made for use of a part of waste dump material for value added products, whichever are feasible.

STABILITY OF BENCHES BY CONTROLLED BLASTING

The damage due to poor blasting has a significant influence upon stability of highwall slopes. Uncontrolled blasting results in rough uneven contours, over breaks, overhangs and extension of tension cracks in the slope. Poor blasting causes opening between various weak planes, which result in loss of resultant cohesion between them. It also results into shattering of the slope mass well behind the desired location and consequently allowing easier infiltration of surface water, which leads to unfavorable groundwater pressures and related problems.

Thus, ground vibrations from blasting have two-fold action of the rock mass. On one hand, they affect the integrity of rocks or their strength parameters while on the other, they can provoke wall or slope collapses when unstabilizing actions are introduced (Jimeno et. al. 1996). Therefore, peak particle velocity due to blasting should be controlled by proper selection of explosive types, blast pattern, maximum charge per delay etc. Bauer and Calder (1971) proposed the following generalized criteria, as given in Table 9, for damage level of particle velocity due to blasting on rock mass and slopes.

Table 9: Damage level of rock mass based on ground vibration (after Bauer & Calder, 1971)

Particle velocity (mm/s)	Predictable damages
<250	No danger in sound rock
250-600	Possible sliding due to tensile breakage
600-2500	Strong tensile and some radial cracking
>2500	Complete break-up of rock masses

These detrimental after effects, due to poor blasting, can be checked by controlled blasting. The aim of the controlled blasting is to minimize the damage of the slope mass forming the ultimate pit slope. The final slope face of any open pit quarry has to be maintained in the soundest possible condition. Better ultimate wall stability can be achieved with controlled blasting (Langefors and Kihlstrom, 1963). The uncontrolled blasting can make a slope unstable (Hoek and Londe, 1974).

The controlled blast holes should be closely spaced and lightly charged than the regular blast holes. It should be blasted before the main blast by applying the delay mechanism. It will help in making a crack line along the desired slope. The controlled blasting will not damage the slope mass beyond these lightly charged pre-split holes. It is

preferable to use electronic detonators in controlled blasting especially during formation of ultimate benches and when the blasting face if closer to dwelling to minimize the back break as well as side effects on vibration / shock generated during the blasting.

The controlled blasting can be tried, experimented and perfected during regular production blasts. The experience of production blast can be applied to ultimate pit slope blast. Mine management may optimize the pre-splitting technique for the site-specific geo-mining conditions to achieve better pit slope stability. The extra effort of controlled blasting is well justified because it checks the instability of the pit slopes thus increasing the profitability of the quarry substantially. It is recommended to optimize the pre-spliting technique for the site-specific geo-mining conditions, if required with help of experts, to ensure smooth surface of the highwalls and to minimize formation of loose boulders.

The blasting near the shear/ fault zone must be optimized. Otherwise, it would be impossible to maintain proper bench width in the zone where faults are present. Poor blasting may result in to merger of the benches which ultimately may lead to failure. Any heavy blast in the proximity of weak/ weathered lithology or near the day lighting major discontinuity would cause sliding of the overlying slope mass. The heavy production blasting should be avoided/ optimized.

SLOPE MONITORING

The main objective of slope monitoring study is to detect any instability well in advance so that any damage to men and machineries can be avoided. If the failure is unavoidable then it can be brought down in a predictable manner. The instability detected in the early stage can be stabilized by applying a suitable remedial measure. If the instability is detected at a later stage, then it will be very difficult to check the instability.

The early identification of movement zones allows steps to be taken to minimize the impact of mining on stability by the implementation of corrective measures and at the same time provides for optimum mineral extraction. The system contrasts strongly with more common 'passive' systems that frequently only record the occurrence of an event for subsequent post-mortem examination. The active monitoring system permits early and confident decision making by management both for safety purposes and for optimum excavation sequencing.

All geotechnical investigations aimed at collecting input design parameters, however complete, involve an inherent risk of inaccuracy. Hence, any attempt of slope stability analyses and evaluation need to be supported by a sound slope monitoring program in order to ensure the safe and smooth mining operations.

The continuous mining operation, blasting and changes in groundwater conditions continuously disturb the existing stress condition in the field. The whole system tries to come into equilibrium by stress redistribution and adjustment, which results into movement of the slope. Hence, it is advisable to monitor the trench slopes regularly to detect any movement. DGMS(Tech.) Circular No. 2 of 2020 dated 09.01.2020, mine manager should have a structured team of trained competent persons for slope monitoring headed by a slope monitoring officer with clearly defined duties and responsibilities.

The slope monitoring method allows failures to be predicted for ensuring safe working conditions. Slope monitoring can be used to confirm failure mechanisms. The review of monitoring results, visual inspection and regular briefing of field people help to detect the onset of failure.

The first sign of instability is a tension crack. So, it is important to carry out regular inspection to detect the development of tension cracks on the crest of the slope as well as on benches and to carry out prompt remedial measure. They may develop as a function of high stresses in the slopes. The opening of cracks will tell whether any deep - seated failure can occur or not. Tension cracks should be filled and sealed to prevent the entry of water, which may cause failure.

The slope monitoring techniques vary widely ranging from simple visual observations of signs of potential instability such as slope bulging, surface fretting and the formation of tension cracks to the use of somewhat complex instrumentation. The scale of the mining operation, transport system and the nature and location of the potential slope failure decides the application of a particular technique.

Survey based methods can be used for absolute monitoring, that is determining the movement of a point or points relative to some datum believed to be outside the zone of potential deformation.

The slope monitoring based on standard surveying techniques have wide acceptance because of the ability to remotely monitor a wall following the establishment of targets. Use of Total Station techniques along with angular measurements have become most popular because of the perceived advantage of low cost and easy availability of trained manpower.

Suggested Slope Monitoring System for Kalamang West (Northern Part) Iron Ore Mine

Considering the size of the mine, design of ultimate configurations etc., the suggested slope monitoring scheme for pits and dumps of Kalamang West (Northern Part) Iron Ore Mine are as follows:

Monitoring of pits and dumps of Kalamang West (Northern Part) Iron Ore Mine is recommended to be done with total station by installing monitoring stations. The monitoring pillars should be located initially at 30 to 50 m interval. Monitoring pillars should be installed all along the top most bench as well as on intermittent benches after every five to six benches of the pit. Advancing benches may not be suitable for installation of monitoring stations as these stations will get broken during machineries operation over those benches. Similarly, monitoring stations should be installed on top bench as well as on intermittent benches of the dump. Base station should be located at stable ground in opposite side of the monitoring stations. One or more base stations could be erected to cover all the area. The base station and monitoring stations should be so located that inter-visibility should be there. The gap between the stations can be increased or decreased as per the requirement of the site based on data analysis. It is a general guideline, which may be changed to meet the local requirement. DGMS (Tech.) Circular No. 2 of 2020 dated 09.01.20 requires mine manager to have a structured team of trained competent persons for slope monitoring headed by a slope monitoring officer with clearly defined responsibilities.

To start with, the monitoring of pits should be done periodically at least once in a month using total station by mine management and the results of monitoring should be recorded in a bound-paged register or in a temper proof electronic form. These data should be regularly analyzed for rate of movement for assessment of instability. Warning level / withdrawal level of slope movement is site-specific and can be decided based on analysis of monitoring data over a long period only. If the analysis of monitoring data reveals, no ground movement in any part of mine or dump, mine management may increase the monitoring frequency from once in a month to once in two months on those part of mine.

However, if mine management detects an average rate of slope movement of 0.5 mm/day over a period of at least one month for most of the pillars of a zone of mine then the mine management should increase the monitoring frequency to fortnightly. If the movement monitoring data shows average movement rate of more than 1.0 mm/day over a period of at least one month then monitoring system design, frequency, and monitoring technology may

have to reviewed by any agency expert in the field of slope design and slope monitoring. Under the condition the working near the affected zone of the mine should also be restricted. The recommendation of such study by expert agency should be implemented by the mine management for the sake of safety of men and machineries.

CONCLUSIONS AND RECOMMENDATIONS

- Based on the assessment of the proposed mining plan and sections, engineering geology, existing geo-mining conditions, strength properties and the related geotechnical controls indicated in the report, the following ultimate pit slope design for 140 m maximum depth of Kalamang West (Northern Part) Iron Ore Mine have been recommended.

Maximum depth of pit at ultimate stage	Geo-mining conditions	Bench Parameters		
		Maximum bench height (m)	**Minimum exposed** bench width (m)	Maximum bench angle (°)
140m	Benches in shale	10	12.5	70
	Benches in Iron	10	11.5	70
	Benches in BHJ/BHQ	10	8	70
	Benches in shale & Iron	10	12	70
	Benches in shale & BHJ/BHQ	10	10.5	70
	Benches in BHJ/BHQ & Iron	10	10	70

- Above mentioned optimum pit slope design are valid with well-developed drainage system in and around the mine to maintain the pit slope in drained condition as well as with machine cutting / controlled blasting for ultimate pit slopes as suggested in this report.
- The operating bench width of pit should never be less than that specified in MMR or as specified above, whichever is higher. Bench height above 10m should be avoided. If height of a bench is less than 10 m in any combination of lithology then bench width should be kept in same proportion to maintain the same overall slope angle.
- If more than 2 rocks are encountered while designing the benches of the mine, then the material which has the wider bench configurations should be adopted for the design of benches.
- Maximum height (i.e. difference in mRL of crest of top most bench to mRL of toe of bottom most bench) of temporary dump in Kalamang West (Northern Part) Iron Ore Mine is not expected to exceed 45 m and therefore, considering the geo-mining

conditions, the slope stability analysis is presented in the report. Optimum design of ultimate temporary dump profile of Kalamang West (Northern Part) Iron Ore Mine is recommended as follows:

Dump design parameters	Values
Maximum height of the dump (i.e. difference of RL of crest of topmost bench and RL of toe of lowermost bench)	45 m
Minimum number of bench /deck/lift/stages	3
Maximum height of any bench/deck/lift/stage	15 m
Minimum exposed width after each bench/deck/lift/ stage	15 m
Ratio of bench height / exposed bench width	1.0
Bench slope angle / Angle of repose	37°
Factor of safety	1.69
Overall slope angle at ultimate stage	26°

- If height of a bench of dump is less than 15m, then bench width should be kept in same ratio as listed above.
- The large-scale instability of recommended ultimate pit profile and dump of Kalamang West (Northern Part) Iron Ore Mine as recommended in this report, is unlikely with above mentioned profile if a well-developed drainage system, slope monitoring and other precautions / recommendations are implemented. Any local steepness at any level or saturation of slope mass may reduce the FOS and may cause slope instability even if the overall slope angle is within the recommended slope angle.
- If two to three benches are made steeper at any level in any part/ depth of the pit / dump then it may reduce its factor of safety. Although the overall slope angle may be quite low but the steeper slope angle of three benches may increase the stress at the toe of relatively steeper part of the slope, which may cause failure. Two or three such small failures may cause a big failure. So, benching should be done properly from top to bottom.

- A fresh geo-technical study from scientific institutions should be conducted within five years or before exceeding 60 m pit depth or whenever there is major change in mining plan, whichever is earlier.
- Cutting of toe of benches of pit and OB dumps should be strictly avoided. Such action reduces the safety factor of the slope.
- Width, gradient and other safety measures like parapet walls, warning notices, signs etc. of all haul roads should meet the criteria specified in MMR and other guidelines.
- The mapping of weak zones, faults and bedding planes in the pit should be a regular process by the departmental geologist. It will help to detect any unfavorable conditions at different stages of mining at the earliest possible which may be utilized in future for re-analysing pit slope stability, or for taking remedial measures. The pits and dumps should be surveyed periodically to produce up-to-date and accurate dump geometry.
- The mine should have an effective garland drain/ bund, all around, to collect/ divert rain water of the catchment area before it reaches the mine slopes. It is essential that these drains should be kept clear of silt and debris. Horizontal drains may be installed in the pit for de-pressurization of adverse groundwater pressure, especially where seepage is observed.
- Every attempt should be made to make a proper gradient along the benches, top and floor of the dump. It will facilitate an effective seepage/ flow of water retained in dumps as well as run-off of rainwater to the drains to take the same away from the dump. The drains should be effectively maintained to divert the drained water away from the dump. During the rainy season, effectiveness of drains in and around the pit and dump should be checked frequently. If this drainage system is not effectively achieved then the dumps may fail due to increase in saturation at the bottom of the dumps.
- Mine management should take all precautions and measures to avoid entry of rain / surface water in the dump mass by providing suitable drainage in and around the mine and dump, failing which the slope may become undrained and thus may reduce stability.
- A bund/ garland drains, depending up on the topography of the area, should be made/ cut all around the toe of dumps to collect run-off of the rainwater before it reaches the dump. Drains should be properly graded to promote rapid water flow and minimize

chances of ponding. Proper cleaning/ desilting and leveling of the drains would be necessary to keep the drains effective.

- To prevent soil erosion, to arrest washed off solids from the fine stacks / dumps and surface run offs, the following measures are being taken and / or need to be continued / taken in future:
    - ✓ Stabilization of waste dump slopes by timely vegetation with native species
    - ✓ Toe wall and garland drains wherever required
    - ✓ Contour trenching
    - ✓ Check dams and siltation ponds

- Mine management should make a structured team of trained competent persons for slope monitoring headed by a slope monitoring officer with clearly defined duties and responsibilities as per DGMS(Tech.) Circular No. 2 of 2020 dated 09.01.2020. The monitoring should be done periodically at least once in a month using total station and the results of monitoring should be recorded in a bound-paged register or in a temper proof electronic form. These monitoring data should be regularly analyzed for rate of movement of monitoring pillars. Slope monitoring should, in general, be done by the mine survey/geotechnical team. In case any adverse situation from stability view-point is detected, advice may be sought from expert agencies in the field of slope stability and slope monitoring for monitoring system design, or data analysis & interpretation to assess slope condition.

Acknowledgements

Authors are thankful to the mine management for providing all facilities, information and helpful discussion during the period of study.

Bibliography

Bandis, S.C., 1990. Mechanical properties of rock joints, Proc. Int. Symp. Rock Joints, Norway, eds. N. Barton and Ove Stephansson, A.A. Balkema, Rotterdam, 125- 140.

Barton, N., 1973. Review of a new shear strength criteria for rock joints, Eng. Geol., Vol. 7, pp. 287-330.

Barton, N. and Choubey, V., 1977. The shear strength of rock joints in theory and practice, Rock Mech., Vol. 10, pp. 1-54.

Bieniawski, Z.T., 1989. Engineering rock mass classification, John Wiley and Sons.

DGMS, 2017, Coal Mines Regulation, 2017 DGMS(Tech.)

Circular No. 2 of 2020 dated 09.01.2020 DGMS(Tech.) Circular No. 3 of 2020 dated 16.01.2020.

Hoek, E. and Bray, J.W., 1981. Rock Slope Engineering, 3rd ed., Inst. Min. Met., London. Hoek, E. and Brown, E.T., 1998. Practical estimates of rock mass strength, Intnl. J. Rock Mech. Min. Sci., Vol. 34, No. 8, pp. 1165-1186.

Hoek, E. and Londe, P., 1974. The design of rock slopes and foundations. General report 3rd Cong. ISRM, Denver, pp. 1-40.

ISRM, 1978. Suggested methods for the quantitative description of discontinuities in rock masses. Commission on the standardization of laboratory and field tests in rock mech.

Langefors, U. and Kihlstrom, B. (1963) The modern technique of rock blasting, John Wiley & Sons Inc., New York.

Pit Slope Manual, CANMET, Ottawa, Canada, (Chapter- Monitoring), 1977.

Singh, V.K., Influence of the geotechnical parameters on slope stability, Ph.D. thesis, 1992.

UNDERTAKING

Ref. No.: MD/ENV/578/130/2023

Dated: 11.04.2023

TO WHOM IT MAY CONCERN

With reference to Environmental Clearance obtained for Kalamang West (Northern Part) Iron Ore Block from State Environment Impact Assessment Authority (SEIAA), Orissa vide SEIAA File No. 55807/89-MINB1/06-2022 dated 18.10.2022 (EC Identification no. EC22B001OR117596) stipulated standard condition no. B. VIII. (i), we undertake that we are committed for periodical occupational health check-up of the employee and the local people through an occupational health expert as per the detailed action plan.

Chief (Kalamang & Gandhalpada Project)

Tata Steel Limited

Chief (Kalamang &
Gandhalpada Project)
Tata Steel Limited

TATA STEEL LIMITED
Mines Division Joda Keonjhar Odisha 758 034 India
Tel 91 7440037036
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

Annexure-16

Expenditure Related to PH Commitments

Sr. No.	Sector	Description	Budget Committed (In Lakhs)	Actual Expenditure till Sep'25 (In Lakhs)
1	**Skill Development**	Development of skill development centre	20	25.08
2	**Education**	Provision of Smart Class facility	24	To be executed under DMF
3		School & infrastructure upgradation (Nest-In structure) at Kalamang High school, Nuagaon UP School & Gandhalpada UP School	102	109.19
4		Construction of boundary wall at schools (100 RM each)	18	
5		Provision of drinking water facility in schools (Including DBW & OHT pipeline)	24	Included in Sr. No.13
6		Provision of coaching facilities for students	25	30.83
7		Provision of boarding/ accommodation facilities for teachers	50	To be executed
8		Provision of bus facility	70	90
9	**Tree plantation**	Development of fruit-bearing trees plot	105	4.56
10	**Agriculture**	Construction of ponds/ Repair of canals	40	54.62
11		Provision of lift-irrigation project	50	33.68
12		Development of spring projects	10	
13	**Drinking Water**	Provision of solar-powered drinking water project (including DBW & OHT pipeline)	110	268.60
14	**Infrastructure and welfare**	Provision of Solar lighting & illumination facility	30	96.11
15		Construction of Playground (Including boundary wall, stage, gate etc.)	20	108.08
16		Club house for Village Committee (Nest-In structure)	40	
17		Beautification of Temple/ Mandap	40	
18	**Swachh Bharat**	Community Toilet & dustbin distribution (Nest- In structure)	60	
19	**Health care**	Provision of Ambulance facility	30	63.53
20		Construction of feeder hospital	100	Land Identified
21		Provision of ultra-sound facility	25	27
		Total	**993**	**911.28**

Annexure-17

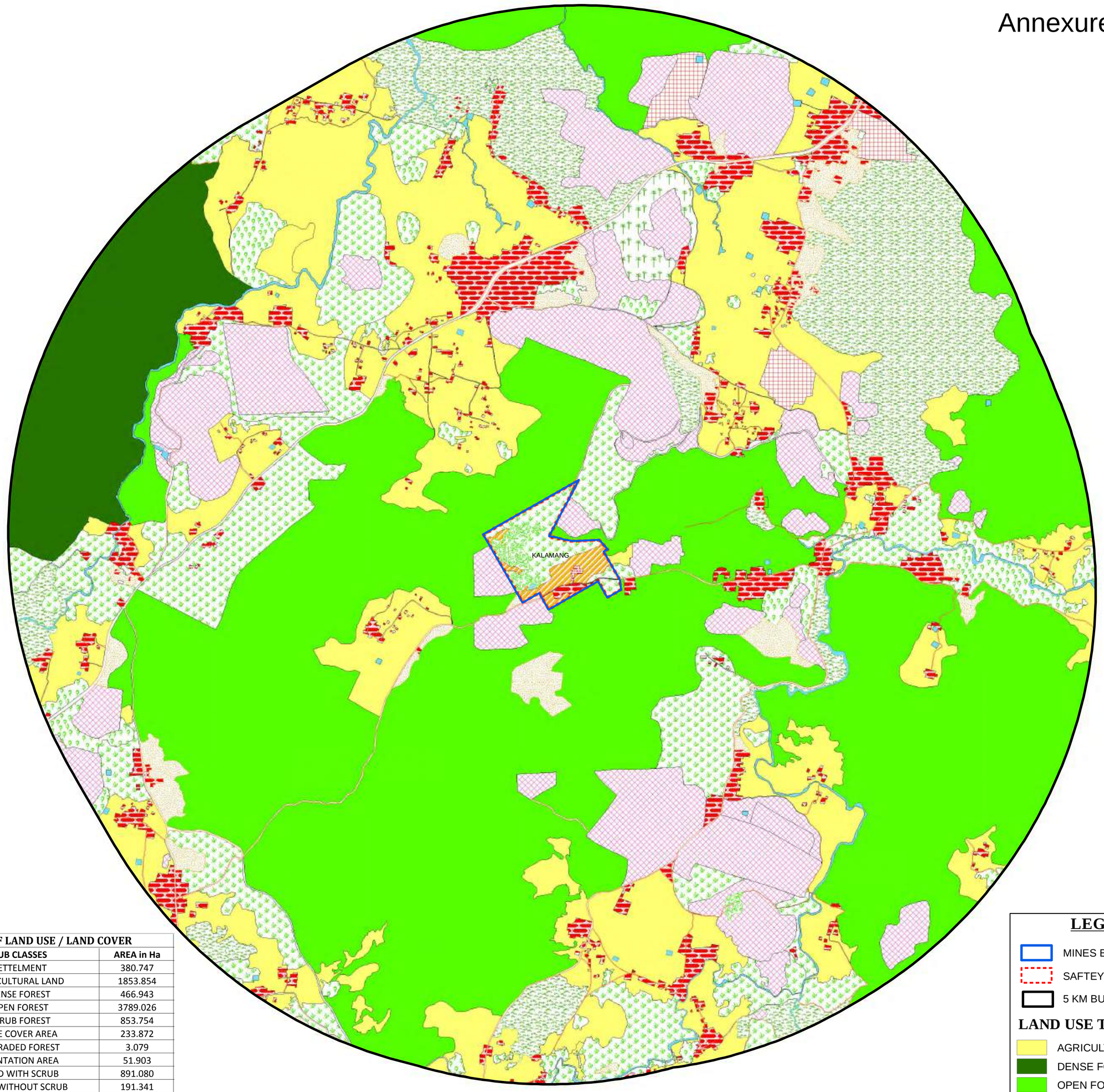
MAP SHOWING LAND USE /LAND COVER AREA OF KALAMANG WEST IRON ORE MINE OF M/s. TATA STEEL LIMITED

Annexure-14

SCALE = 1:25,000

Kilometers

0 0.5 1 2 3



AREA CLASSIFICATION OF LAND USE / LAND COVER		
MAJOR CLASSES	**SUB CLASSES**	**AREA in Ha**
BIULT UP LAND	SETTELMENT	380.747
AGRICULTURAL LAND	AGRICULTURAL LAND	1853.854
FOREST & VEGETATION	DENSE FOREST	466.943
	OPEN FOREST	3789.026
	SCRUB FOREST	853.754
	TREE COVER AREA	233.872
	DEGRADED FOREST	3.079
	PLANTATION AREA	51.903
WASTELAND	LAND WITH SCRUB	891.080
	LAND WITHOUT SCRUB	191.341
MINES & INDUSTRY	QUARRY	0.000
	BACKFILLING AREA	0.000
	STACKYARD	0.000
	DUMP	0.000
	BARREN ROCKY	23.888
	ABANDONED CRUSHER SITE	1.055
	HAUL ROAD	0.714
	DEGRADED FOREST	18.472
	INFRASTRUTRE,INDUSTRIAL AREA,ETC	44.884
	7.5 METER SAFETY ZONE ALONG WITH MINES BOUNDARY	3.863
WATERBODY	WATERBODY	68.421
OTHERS	ROAD	112.811
	OTHER MINING	1067.567
	CRUSHER	0.152
	PLANT	76.113
GRAND TOTAL		**10133.538**

SOURCE:- CARTOSAT 3 MX 12968 52 9
CARTOSAT 3 MX 12968 51 9
DATE OF PASS:- 2.06.2022

LEGEND

- MINES BOUNDARY
- SAFTEY ZONE (7.5 MTR)
- 5 KM BUFFER BOUNDARY

LAND USE TYPE

- AGRICULTURE LAND
- DENSE FOREST
- OPEN FOREST
- SCRUB FOREST
- TREE COVER AREA
- LAND WITH SCRUB
- LAND WITHOUT SCRUB
- SETTLEMENT
- PLANT
- KALAMANG MINES AREA
- OTHER MINING
- ABANDONED CRUSHER SITE
- HAUL ROAD
- ROAD
- WATER BODY

Annexure-18

Date: 31.03.2024

OMQ/EMP/02/2024

DECLARATION

Formation of Environment Management Cell

Location: Ore Mines & Quarry Division which includes following locations→

1. Noamundi Iron Mine, over 1160.06 Ha located at Mahul, Balijore, Korta, Noamundi, Sarbil &Balijori villages, West Singhbhum District, Jharkhand.
2. Katamati Iron Mine, over 403.3238 Ha. At village Deojhar & Thakurani RF, Keonjhar District, Odisha.
3. Joda East Iron Mines, over 671.093 Ha. Located in village Joda, Kamarjoda, Banspani, Khuntpani &Baitarani RF in Barbil Taluka, Keonjhar District, Odisha.
4. Khondbond Iron & Mn. Mines, over 978 Ha. Located in village Khondbandh, Tehsil Barbil, Keonjhar District, Odisha.
5. Vijaya-II Iron Ore Mines, over 155.078 Ha. Located in village Ghatkuri, Tehsil: Noamundi, West Singhbhum District, Jharkhand.
6. Kalamang West (Northern Part) Block Iron Ore Mines, over 92.875 Ha. Located at village Gandalpada, Keonjhar District in villages Kalamang & Ghodabudani, Sundargarh Districts, Odisha.
7. Neelachal Iron Ore Mines, over 874.290 Ha. Located at Keonjhar & Sundargarh Districts, Odisha.
8. Gandhalpada Iron Ore Mine, over 241.10 Ha. At atGandhalpada, Guali and Barpada Villages, Barbil Tehsil, Keonjhar District, Odisha.

A separate Environment Management Cell has been formed, with suitable qualified personnel, under the control of Chief Mine Planning & Projects, who reports directly to the General Manager of Ore Mines & Quarry Division. The environment Management Cell will ensure compliance of following Acts & Rules but not limited to:

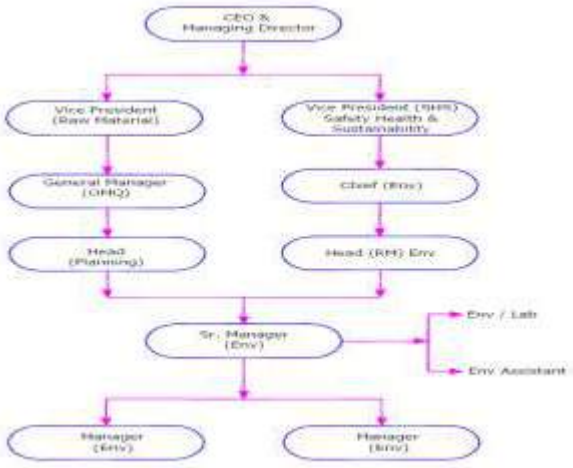
1. The Environment (Protection) Act, 1986.
2. Environmental Impact Assessment Notification, 14th Sep-2006.
3. Wildlife Protection Act 1972
4. Air (Prevention and Control of Pollution) Act, 1981
5. Water (Prevention and Control of Pollution) Act1974
6. Noise Pollution (Regulation and Control Act) 1990
7. Public Liability and Insurance Act 1991
8. The Forest (Conservation) Act. 1980
9. Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016**.**
10. E-waste Management Rules, 2022
11. Bio-medical Waste Management Rules, 2016
12. Battery Waste Management Rules, 2022

13. Plastic Waste Management Rules, 2022

The Environment Management Cell Consists of Following Personnels:

1. Shri. Awnish Kumar (Chief-Mine Planning & Projects)
2. Shri. Mukesh Kumar Prasad (Head-Environment Management)
3. Shri. Pinku Kumar (Head- Mine Planning)
4. Shri. Vivek Kumar Agarwal (Senior Area Manager- Planning)
5. Shri. Abinash Das (Area Manager- Environment)
6. Shri. Gaurav Dubey (Area Manager- Environment)
7. Shri. Roshan Singh (Area Manager- Horticulture)
8. Shri. Gaurav Mukherjee (Area Manager- Planning)
9. Shri. Vishal Kumar Singh (Area Manager- Planning)
10. Shri. Debasish Das (Senior Manager- Environment)
11. Shri. Sudhanshu Ranjan (Manager- Environment)
12. Shri. Shubham Singh (Manager-Environment)
13. Shri. Rishi Raj Kashyap (Manager-Environment)
14. Shri. Ramendra Kumar (Officer- Environment)
15. Shri. Jhasketan Pradhan (Senior Environment Assistant)
16. Shri. Soumyak Palei (Environment Assistant)
17. Shri. Pragyan Prakash Mohanto (Environment Assistant)
18. Shri. Ganesh Karua (Environment Assistant)
19. Shri. Bharat Pan (Environment Assistant)
20. Shri. Gurucharan Laguri (Environment Assistant)
21. Shri. Gayatri Behera (Environment Chemist)
22. Shri. Jarsaniya Harshkumar Dayabhai

The detailed Organogram is as follows:



f: Tata Steel Limited

Awnish Kumar

Chief- Mine Planning & Projects (OMQ)

भारत सरकार
Govt. of India
श्रम एवं रोजगार मंत्रालय
Ministry of Labour & Employment
खान सुरक्षा महानिदेशालय
Directorate-General of Mines Safety

NO: 33252135|SEZ|Bhubaneshwar Region 2|Perm|2025|276936 Bhubaneswar, Date: 25/09/2025

प्रेषक,
खान सुरक्षा निदेशक,
भुवनेश्वर क्षेत्र 2,
भुवनेश्वर।

सेवा में
प्रबंधक,
कालमांग पश्चिम (उत्तरी भाग) लौह अयस्क खदान
मेसर्स टाटा स्टील लिमिटेड लिमिटेड
गाँव:कालमांग,तहसील: कोयरा,
जिला – सुन्दरगढ़ (ओडिशा राज्य) -758034 ।

Subject: Permission under Regulation 106(2)(b) of the Metalliferous Mines Regulations, 1961 for deployment of Heavy Earth Moving Machinery in conjunction with deep-hole drilling and blasting for digging, excavation and removal of ore and overburden at Kalamang West (Northern Part) Iron Ore Mine of M/s TATA Steel Limited .

Sir,

Please refer to your online application No. 276936 Dated 09.08.2025 and your letter Nos. KGP/KAL/12/FY26 dated 05.08.2025 and KGP/KAL/23/FY26 dated 10.09.2025 , enclosing therewith surface plan No. KWIM/HB/2025/I/S1 dated 10.09.2025 on the above subject.

The matter has since been examined on the basis of the information furnished in your application under reference and shown on the enclosed plans and sections submitted by you.

In exercise of the powers conferred on the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under the provisions of Regulations 106(2)(b) of the Metalliferous Mines Regulations, 1961 and by virtue of authorisation granted to me by the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Section 6(1) of the Mines Act, 1952, I, hereby permit you for the deployment of Heavy Earth Moving Machinery in conjunction with deep-hole blasting for digging, excavation and removal of ore and overburden within the area demarcated/bounded by change points D1-D2- D3-D4-D5-D6-D7-D8-D9-D10-D11-D12 -D1 shown in blue colour bold line on the Surface Plan No. KWIM/HB/2025/I/S1 dated 10.09.2025., at Kalamang West (Northern Part) Iron Ore Mine of M/s TATA Steel Limited located in Village- Kalmang & Ghodabudhani, Tehsil-Koira, District-Sundargarh(Odisha) subject to the following conditions being strictly complied with:

I. GENERAL:

1.1 Except where otherwise provided for in this permission, all provisions of the Metalliferous Mines Regulations, 1961 shall be strictly complied with.

1.2 Safety Management Plan shall be prepared and implemented as per DGMS Tech (S&T) Circular No.5/2016 and DGMS Technical Circular No. 3/2019.
1.3 No blasting shall be conducted in the mine using Ammonium Nitrate Fuel Oil (ANFO), Site Mixed Slurry (SMS) or Site Mixed Emulsion (SME) explosives without obtaining a separate permission under Regulation 155(1) and 162(5) of Metalliferous Mines Regulations, 1961.
1.4 No deep hole blasting shall be conducted in the mine within the danger zone of 300m from any permanent building or other surface structure not belonging to the owner except with the strict compliance of provisions under Regulations 164(1A)(c)&(1B)(a) of the Metalliferous Mines Regulations, 1961, which includes obtaining of prior permission in certain circumstances as required thereunder.

II. OPENCAST WORKINGS:

2.0 HEIGHT AND WIDTH OF BENCHES:

2.1 The height of the benches in overburden consisting of alluvial soil, morrum, gravel, clay, debris or other similar ground shall not be more than 3 meters and width thereof shall not be less than three times the height of the bench.
2.2 The height of the benches in ore body or overburden of rock formation other than that mentioned in para 2.1 above shall not be more than the digging height or reach of the excavation machine in use thereat for digging, excavation or removal, or in any case not more than 10m, and the width thereof shall not be less than –

(i) the width of the widest machine plying on the bench plus two metres, or
(ii) if dumpers/tippers/trucks ply on the bench, three times the width of the largest dumper/tipper/truck; or
(iii) the height of the bench,
whichever is more.

2.3 Special care shall be taken to prevent danger to the work-persons in zones where any slip or other planes of weakness or other geological disturbances are encountered or exist. In such zones, the bench height shall be suitably reduced and width suitably increased to improve stability.
2.4 Where the excavation is proposed in an area having surface topography in the form of hillock(s), the mining shall be commenced with laying of haul roads right upto the top(peak) of the hillock(s) and the workings shall proceed by forming benches from top downwards.

2.5 No manual workers shall be employed on any bench where HEMM is deployed or on the next lower bench. Manual workers may be employed only after withdrawal of HEMM and only at the places where benches conform to the requirements of Regulation 106(1), & (2)(a) of the Metalliferous Mines Regulations, 1961 and sides are free from any undercut, overhang and loose.

3.0 ROADS FOR TRUCKS AND DUMPERS ETC:

3.1 All haul roads for dumpers/trucks/tippers or other mobile machinery shall be constructed to suit its load capacity and shall be maintained in good condition. No vehicle other than the HEMMs shall be used on the haul roads, except between designated points and when permitted in writing by the manager.

3.2 Where practicable, all haul roads leading from the surface to opencast workings shall be arranged to provide one-way traffic. Where it is not practicable to provide for one way traffic, width of haul road shall not be less than three times the width of the largest vehicle plying on that road plus 5 m or definite turn-outs, crossing points, and waiting points shall be designated and demarcated by proper sign boards for the guidance of operators/drivers of such vehicles.

3.3 All corners and bends on haul roads shall be so designed, made and kept maintained that the operators and drivers of vehicles plying on the haul road have clear view for a distance not less than 3 times the braking distance of the largest HEMM working at 40 kms/hour.

3.4 Where it is not possible to ensure the visibility as mentioned in clause 3.3 above, the road shall be provided with two separate lanes for up and down traffic, each of width not less than 2 times the width of the largest vehicles plying thereon plus 3 m, with a strong divider at centre with adequate lighting and reflector along the divider.

3.5 No road shall have gradient steeper than 1 in 16. However, gradient of the ramps shall not be steeper than 1 in 10 and its length shall not be more than 50m at one stretch. The ramps shall be used for crawler mounted machines only not for tyre mounted machines.

3.6 (i) If large capacity dumpers and smaller capacity tipper/trucks are deployed in the mine, separate roads for dumpers and tippers/trucks shall be provided.
(ii) Separate road shall be provided for Light Motor Vehicles plying in the mine premises. Where it is not practicable, definite turnouts, crossing points and waiting points shall be designated for use of vehicles.
(iii) Pedestrians shall not be allowed to travel on the haul road made for tippers, dumpers or other mobile machinery.
(iv) Two wheelers shall not be allowed into the mine.

3.7 Where any part of the road exists above the level of the surrounding area, a strong parapet wall or berm or embankment of the following dimensions:

i. width at top not less than 1 m,
ii. width at bottom not less than 2.5 m,
iii. the height not less than the diameter of the tyre of largest vehicle plying on the road.

It may be noted that mere dumping of mud or overburden shall not be treated as strong parapet wall.

3.8 Warning notices and road signs with fluorescent paint shall be provided along the haul roads at appropriate places like crossings, curves etc. for guidance of drivers, especially at night times.

3.9 At every curve, a parapet wall or vertical posts with ‘Zebra lines’ shall be provided to help the drivers to keep the transport vehicles on the track, especially at night times.

3.10 Suitable drainage system shall be provided and maintained on one side of the haul road.

4.0 FENCING AROUND OPENCAST WORKINGS:

4.1 The top edges of the opencast workings shall be kept fenced with wire rope strands or barbed wire, supported on movable posts (wooden, iron or concrete). The gap between the adjacent rope strands or wires shall not be more than 0.30 m, the bottom-most rope strand/wire shall not be more than 0.25 m above the ground level and the top most rope strand or wire shall not be less than 1.00m from ground level.

4.2 The periphery around the limits of opencast workings shall be kept fenced with a masonry wall not less than 0.40m thick and not less than 1.2 m in height, with a parapet top.

5.0 SPOIL BANKS AND DUMPS:

5.1 While removing overburden, the top soil shall be stacked at a separate place, so that the same is used to cover the reclaimed area.

5.2 Spoil, overburden or debris shall be deposited at places belonging to the mine and duly approved by the manager in writing.

5.3 Spoils, overburden or debris shall not be deposited, beneath transmission, telephone or power lines or near any other public structure.

5.4 The slope of a spoil bank face shall be determined by natural angle of repose of the material being deposited but, in any case, shall not exceed 37.5^0 from the horizontal. The spoil bank face shall not be retained by artificial means at an angle in excess of its natural angle of repose.

5.5 Loose overburden and other such material from opencast workings or other rejects from plants, mills or from other source shall be dumped in such a manner that there is no possibility of dumped material sliding.

5.6 Any spoil bank exceeding 30 m in height shall be kept benched so that no such bench exceeds 30 m in height and the general slope does not exceed 1 vertical to 1.5 horizontal. However, the overall height of any spoil bank shall not be allowed to exceed 60 m unless a greater height has been recommended as a result of a scientific study made on stability of the dump and subject to such conditions as recommended in the study report.

5.7 Garland drains shall be provided around the periphery of the dumps, both at top and bottom, to collect run-off water. A clay capping shall be made over the exposed dump surface to prevent water entry.

5.8 The toe of a spoil bank shall not be extended to any point closer than 1.5 times its vertical height or 45 m, whichever is more, of mine opening, railway or other public works, public road or building or other permanent structures not belonging to the owner.

5.9 A suitable fence shall be erected between any railway line, other public works or road, or building or structures of permanent nature not belonging to the management, and the toe of every active spoil bank so as to prevent any unauthorised persons from approaching the spoil bank.

5.10 No person shall, or shall be permitted to approach the toe of an active spoil bank where he may be endangered from material rolling down the face. Suitable warning signs at conspicuous places shall also be displayed.

6.0 SUPERVISION OF OPENCAST WORKINGS:

6.1 A person possessing First class manager’s competency certificate holder under the Metalliferous Mines Regulations, 1961 shall be appointed as the manager of the mine. This permission shall stand revoked as soon as the qualified manager ceases to work at the mine. Use of HEMM shall be suspended in the absence of manager with aforesaid qualification.

6.2 During every shift, the opencast workings shall be placed under the charge of such number of Assistant Managers, assisted by adequate numbers of mine foremen and mining mates, as to have overall control and guidance of operations connected with the mine and who shall be responsible to see that all the regulations and orders made thereunder are strictly complied with.

6.3 Each and every operation, including operations carried out through contractors' workers or by outside agency, shall be placed under the charge of a competent supervisor, duly appointed and authorised by the manager, with his jurisdiction clearly demarcated.

6.4 A code specifying duties and responsibilities of all mine-officials, i.e., Assistant Managers, Under Managers, Engineer(s), Supervisors, Technicians, Mechanics, Fitters, Machine Operators, helpers, loading supervisors etc. shall be drawn up and distributed to all concerned.

6.5 The Manager shall issue to every Driver/Operator, Supervisor and Mine Official connected with the use of Heavy Earth Moving Machinery, a copy of rules/regulations, orders made thereunder and guidelines listed in this permission governing his duties, in a language understood by the person concerned. The Manager

and the Engineer shall be responsible to ensure that all the precautions and guidelines listed in this permission are strictly followed by all concerned.

6.6 It shall be the responsibility of the Manager, Engineer and other supervisors to ensure that all persons working in the mine, and those working on machines/equipment etc. work as per the code and all machines and equipment etc. are installed, operated and maintained in safe working conditions.

III. DESIGN, OPERATION AND MAINTENANCE OF HEMM

7.0 DESIGN AND SAFETY FEATURES OF HEMM:

7.1 General Requirements:

The following Safety features and devices shall be provided in all Heavy Earth Moving Machinery (HEMM) including dumoers and tippers:

7.1.1 Access:

(i) Safe access to the Operator Station and to routine maintenance points of HEMM shall be provided. Proper placement of components of the access system shall permit and encourage a person to use three-point support while ascending, descending or moving about the access system, when more than 1m above the ground. Two-point support is acceptable for stairs, stairways, ramps, walkways and platforms. Three-point support should be used for all ladder systems. Track shoe and track pad surfaces are accepted as access steps if three-point support is provided when the HEMM is in 'OFF' condition.

(ii) On machines with articulated frames and in the fully articulated steering position, a minimum clearance of 150mm shall be provided between firm structure and components with relative movement in the path of the access systems to the operator's station.

(iii) An alternative exit path shall be provided on a different location of the machine than the primary access path from the operator platform. If the alternative exit path is Not Obvious, it shall be identified. The alternative exit path is intended for emergency situations (e.g. machine tip-over) and therefore does not need to meet the primary access requirements.

7.1.2 Operator's Station (Cabin):

(i) The cabin shall protect the operator against foreseeable adverse climatic conditions, heat, dust, noise etc. Air-conditioning system shall be provided in the Operator's Station. A ventilation system, an adjustable heating system and a system for defrosting windows shall be provided wherever required.

(ii) Alternative opening (Emergency Exit): An alternative opening shall be provided on a side other than that of the primary opening. A window panel or another door is acceptable if they are easy to open or remove without the use of keys or tools. Latches may be used if they can be opened from the inside without the use of keys or tools. The breaking of a suitable size of glass pane is considered to represent a suitable alternative opening, provided that the necessary pane hammer, immediate accessible to the operator, is provided and stored in the cab. When the window panel is used as an emergency exit, it shall bear an appropriate marking.

(iii) Doors and Windows: Doors, Windows and flaps shall be securely held in their intended operating positions. Doors shall be retained at their intended operating positions by a positive engagement device. The front window shall be fitted with motorized windscreen wipers and washers. The tank of the window washers shall be easily accessible.

(iv) Pipes and hoses that contain fluids at pressures exceeding 5 MPa or temperatures above 60 °C located inside the cab shall be suitably guarded.

7.1.3 Operator's Protective Structures:

All HEMM with a seated operator shall be equipped with a roll-over protective structure (ROPS). The ROPS shall comply with ISO 3471. Further, it shall also be fitted with FOPS, when they are intended for applications where there is a risk of falling objects. The fitted FOPS shall be in accordance with ISO3449.

7.1.4 Seats:

(i) The Operator's Station shall be fitted with an ergonomically designed adjustable seat that supports the operator in a position that allows the operator to control the machine under the intended operating conditions. The seat and it's suspension shall be so designed to reduce vibration transmitted to the operator to the lowest level that can be reasonably achieved.

(ii) If an additional seat for a trainer is installed in the Operator's Station, it shall be padded and shall provide adequate space for the trainer. The trainer shall also have available a conveniently placed handhold.

(iii) Seat belt for Operator with reminder shall be provided.

7.1.5 Operator's Controls and Indicators:

(i) The controls shall be of suitable design and construction and arranged so that they are able to be operated with ease from the operator's seat and within the operator's force limits. Controls shall be laid out and designed to allow easy and safe operation based on the principle that give direction of movement of any control produces a consistent and expected effect. The surfaces of frequently used pedals shall be fitted with skid resistant type materials.

(ii) Controls that can cause a hazard due to inadvertent activation shall be so arranged, deactivated or guarded as to minimize the risk, particularly while the operator is getting into or out of the operator's station. The deactivation device shall either be self-acting or shall act by compulsory actuation of the relevant device.

(iii) A device/system shall be provided to release the residual pressure in each hydraulic and pneumatic circuits which can cause a risk.

7.1.6 Starting and Stopping System:

(i) All HEMM shall be equipped with starting and stopping device (e.g., key). The starting system shall have a provision for protection against unauthorized use.

(ii) The starting and Stopping system shall be designed such that movement of the machine, working equipment and attachment, shall not be possible, while starting or stopping the engine, without activating the controls (e.g. Transmission Neutral-Engine Start safety arrangement).

(iii) In case of remote control operated equipment, the Starting and Stopping system shall conform to National/Internationally accepted standard.

7.1.7 Steering System:

(i) The steering system shall be such that the movement of the steering control corresponds to the intended direction of steering.

(ii) Hydraulic Steering circuits shall, if used, incorporate the following features:

(a) pressure control devices as required to avoid excessive pressure in hydraulic circuit;

(b) hydraulic hoses, fittings and tubing with test burst pressures at least four times the working circuit pressure control device(s) for normal and emergency steering systems;

(c) plumbing arrangements which avoid excessively tight hose bends, torsion in the installed hoses, or scrubbing and chafing of hoses.

(iii) An emergency steering system shall be provided which also function with reverse machine movement if the maximum rated speed in reverse exceeds 20 km/h.

(iv) A warning device indicating a normal steering power source shall be provided. This warning device shall be audible or visual, and shall be activated by failure of the normal steering power source.

(v) Articulation safety locks hall be provided in articulated steering equipment. All articulated equipment shall be equipped with a safety bar or a device, which can readily be fitted without special tools, to prevent movement of the articulation joint during maintenance work in the vicinity of this joint

7.1.8 Brake System:

All HEMM shall be equipped with the following brake systems and all these systems shall be effective under all conditions of service, load, speed, terrain and slope, according to the intended use of the machine:

(i) Service Brake: to be used as the primary braking system during normal operation of the equipment.

(ii) Emergency brake-to be applied by the operator in the event of a failure of the service brake.

(iii) Parking brake-used to prevent movement of stationary equipment.

Provided that atleast one of the brakes shall be "fail safe", i.e. the spring applied-hydraulically released (SAHR) or any other means.

All HEMM shall have a brake system in accordance with ISO3450 except for crawler machines with a travel speed less than 20 km/h, which shall have a brake system in accordance with ISO10265.

7.1.9 Visibility:

(i) All HEMM shall be designed so that the operator has sufficient visibility from the operator's station in relation to the travel and work areas of the machine necessary for its intended use. The

performance criteria shall be in accordance with ISO5006.

(ii) Rear Vision Camera shall be provided in all HEMM.

(iii) Blind Spot Mirrors / Camera apart from rear side view mirror to enable operator to have clear visibility of blind spot shall be provided in all HEMM.

7.1.10 Stability:

(i) All HEMM with attachments, including optional equipment, shall be designed and constructed so that stability is provided under all intended operating conditions including maintenance, assembling, dismantling, and transportation, as specified by the manufacturer in the operation manual.

(ii) Devices (e.g. outriggers, oscillating axle locking) intended to increase the stability of HEMM in working mode shall be fitted with interlocking devices or check valves which keep them in position in case of hose failure or in case of oil leakage.

7.1.11 Noise:

The operator and persons near to the HEMM shall not be exposed to noise level that exceeds an eighth ours' equivalent continuous sound pressure level of 85 dB(A) and wherever it exceeds 85 dB(A), Personnel Protection Equipment (PPE) of adequate strength shall be used by the operators and the persons.

7.1.12 Warning devices and safety signs:

(i) All the HEMM shall be equipped with an audible warning device (horn) controlled from the operator's station.

(ii) Warning system for Operator's fatigue shall be provided in all HEMM.

(iii) Audio Visual Alarm (AVA) system for reversing shall be provided in all HEMM.

(iv) Safety signs and hazard pictorials shall be displayed at conspicuous places.

(v) Retro-Reflective Reflectors shall be provided on all sides of the HEMM at suitable positions.

7.1.13 Protective measures and devices:

(i) All dangerously exposed moving parts of the equipment shall be provided with suitable guards of substantial construction to prevent injury to person(s).

(ii) Guards or shields shall be provided in the vicinity of exhaust and turbocharger to prevent fuel or oil spraying on hot surfaces.

7.1.14 Electrical and Electronic Systems:

(i) Electrical components and conductors shall be installed in such a way as to avoid damage from exposure to environmental conditions (corresponding to the intended use of the machine) that can cause deterioration. Electrical component insulation shall have flame-retardant properties.

(ii) Degree of protection:

Depending on the location/installation of electrical and electronic components, the following degrees of protection are required:

(a) All components installed exterior to the machine or directly exposed to the environment shall have a minimum degree of protection corresponding to according IEC60529,IP55;

(b) All components installed in the operator's cab or protected against the environment, the protection shall be designed and executed to safeguard a correct function under expected and intended conditions.

(iii) Electronic controls, connectors in control circuits, multi-pin connectors and control switches external to the cab, shall have a minimum protection of IP55.

(iv) All HEMM powered by electrical power source shall be provided with tripping device in Operator's Cabin to cut off Electric supply at Principal Switch Gear (PSG) end.

7.1.15 Fire Protection

(i) All HEMM shall be equipped with suitable portable Fire Extinguisher(s) in addition to Automatically operated Fire Detection and Suppression device or System.

(ii) Hydraulic hoses, Electric Wires, sleeves and conduits (where cable/wire is passed) of fire-resistant quality shall be provided in all HEMM.

7.2 In addition to General requirement mentioned above, the following safety devices/features specific to machines shall be provided:

7.2.1 Dumpers:

a) Mechanical steering locking to prevent untoward movement of steering wheel and tyre during work persons working below the cabin while engine is running.

(b) Mechanical type device to protect the operator in case of head to tail collision of dumpers.

(c) Limiting speed device to limit the speed as per working conditions.

(d) Propeller shaft guard.
(e) Proximity warning device.
(f) Dump body raised position indicator with Warning.
(g) Retarder System in addition to Service, Parking and Dump Brakes.
(h) Rock ejectors for tandem tyres.
(i) Body raised position mechanical locking arrangement
(j) Engine cut off arrangement/ Battery Cut-off switch on front lower portion of the dumper.
(k) Cabin Guard Extension/Canopy fully covering operator's cabin.
(l) Load Indicator.
(m) Auto dipping System.

7.2.2 Tippers /Trucks:

(a) Cabin Guard Extension/ Canopy fully covering the operator's cabin.
(b) Exhaust/Retard Brake.
(c) Propeller shaft guard
(d) Tailgate protection
(e) Limiting speed device
(f) Dump Body lift position locking arrangement.
(g) Dump Body raised position indicator with Warning.
(h) Dum body stabilizers.
(i) Proximity warning device
(j) Auto dipping System
(k) Load Indicator.

7.2.3 Excavators:

7.2.3.1 Hydraulic Excavators:

(a) All functions cut off switch
(b) Swing Motor Brake and Swing lock
(c) Parking Brake.
(d) Vent valve on top of hydraulic tank (should be able to be removed without any tool).
(e) Provision for Limiting of hydraulic cylinders-Stoppers.
(f) Battery cut off switch out side cabin
(g) Two-way communication system other than mobile phone in Operator's Cabin.

7.2.3.2 Rope Shovels:

(a) All functions, such as Crowd, Hoist, Swing, Propel and Drag shall be provided with 'ON' type brake so as to automatically apply the brake in case of Electrical power failure.
(b) Travel limit switches for crowd, hoist and Drag functions as applicable.
(c) Limit switch for boom movement.
(d) Two-way communication system other than mobile phone in Operator's Cabin
(e) Boom crack monitoring system in Draglines.

7.2.4 Drills:

(a) Dust prevention or suppression system provided in the Drills shall confirm to DGMS circular no. DGMS (S&T)/circular (Approval) No.1, dated 10.03.2017.
(b) Emergency 'Stop' push button in
    (i) Operator's cabin
    (ii) Mainframe.
    (iii) Propeller pendent
    (iv) Rear end

(c) Over Temperature protection devices, in motor winding and other related parts.
(d) Explosive vent in transformer.
(e) Interlock between propel and drilling operations.
(f) High air discharge temperature trip switch
(g) Low lube oil pressure cut off switch (engine and compressor)
(h) Oil stop valve (electric solenoid valve in compressor lubrication line)
(i) No bump circuit

(j) Tower lock.
(k) Propel joystick-spring loaded type to return to neutral (dead man safety)
(l) Lock check valves for preventing creeping in drill
(m) Unloader valve
(n) Stabilizers
(o) Break out wrench.

7.3 All Heavy Earth Moving Machinery including dumpers and tippers shall be provided with Safety features and devices mentioned above before putting them into operation in a Mine.

7.4 The various safety features fitted or to be fitted with Heavy Earth Moving Machinery (HEMM) and Heavy/Light vehicles used in the mine shall conform to the standards as stipulated in DGMS (Tech) circular No. 06 of 2020, dated 27.02.2020.

8.0 OPERATION OF HEMM OTHER THAN DUMPERS/TIPPERS:

8.1 Operation:

(a) Every shovel, excavator and other machine shall be under the charge of a competent person, authorised in writing by the manager, herein called as the 'Operator'.

(b) All persons employed or to be employed to operate shovel, excavator and other machine shall be trained and their competency shall be evaluated by a Board constituted by the management. The members of such board shall be persons who are not connected with imparting of training. However, the training officer(s) may be co-opted in the Board as observer. The Board may require operators to possess certain minimum qualifications in case of higher technology/automation based equipment.

(c) Only such fitters/mechanics possessing driver's/operator's license, shall be allowed to carry out test-run of shovel, excavator and other machine.

(d) No person other than the operator or any person so authorised in writing by the manager shall ride on a shovel, excavator or other machine.

(e) No person shall be permitted to ride in the bucket of a shovel, excavator or other machine.

(f) Shovel/excavator bucket shall be lowered to the ground during greasing operations.

(g) No shovel/excavator shall be operated in a position, where any part of the machine or suspended loads therefrom are bought closer than 3m to exposed high voltage transmission lines, unless the current has been cut off from such exposed transmission lines, and positive means have been taken to prevent the lines from being energised. A notice of this requirement shall be posted at the operator's position.

(h) Electrical cables, if any, shall be laid in such a manner that they are not damaged either by falling rocks or by any mobile equipment.

(i) The shovel/excavator bucket shall be pulled out of the bank as soon as it is full.

(j) When being operated in soft or unstable ground, every shovel and excavator shall be supported on mats, heavy planks or poles so as to distribute the load of the machinery over larger area and prevent its toppling.

(k) When not in use, shovel/excavator shall be moved to and stood on stable ground.

(l) If more than one stripping machine is in use in any area, either on the same bench or on different benches, the machines shall be so spaced that there is adequate space for safe operation of each equipment, and there is no danger from flying or falling pieces of stones etc. from one machine to the other.

8.2 Duties of Shovel Operators:

Every person authorised to operate heavy earth moving machineries such as shovel or excavator shall-

a. inspect the machine assigned to him in the beginning of his shift and test the various systems, sub-systems and protective devices, as stipulated in this respect by the engineer in consultation with the manufacturer or supplier;
b. not take out the machine for work nor shall he operate the machine unless he is satisfied that it is mechanically sound and in efficient working order;
c. maintain a record of every inspection made under clause (a) in a bound paged book kept for the purpose and shall sign every entry made therein;
d. keep the cabin or engine room and all window glasses clean;
e. keep the walk-ways, hand-rails, ladder-ways free of loose tools, lubricants or other material that might fall or cause a tripping hazard;
f. not allow any unauthorised person to ride on the machine;
g. not move or operate the machine when persons are in such proximity as to be endangered;
h. check that the visual aids like blind spot mirrors, rear vision cameras, etc. are in place and working in order to have proper visibility around the equipment, or else immediately report any defect noticed to the engineer;
i. not swing the bucket over the passing haulage units or over the cabin of the units being loaded;
j. lower the bucket to ground, switch-off the power supply to the machine or stop the prime mover, lock the cabin door and switch-off the battery cut-off switch before leaving the machine;
k. strictly adhere to the code of practices prepared by the manager of the mine while operating the machinery;
l. enter the condition of the machine at the end of his shift in the register or book maintained under clause (c) for necessary information for his successor.

9.0 OPERATION OF DUMPER/TIPPER/TRUCK:

9.1 Operation:

(a) Every tipper/truck or dumper shall be under the charge of a competent person authorised in writing by the manager herein called the 'driver'.

(b) All persons employed or to be employed to drive/operate trucks/dumpers/tippers shall be trained and their competency shall be evaluated by a Board constituted by the management. The members of such board shall be persons who are not connected with imparting of training. However, the training officer(s) may be co-opted in the Board as observer. The Board may require operators to possess certain minimum educational qualifications in case of higher technology/automation-based equipment.

(c) Only such fitters/mechanics possessing driver's/operator's license, shall be allowed to carry out test-run of trucks/dumpers/tippers.

(d) No person other than the driver or the manager or any person authorised in writing by the manager shall ride on a truck or dumper.

(e) No person shall, or shall be permitted to, ride on the board of a running truck or dumper.

(f) No vehicle shall be loaded/unloaded on gradient.

(g) As far as possible, loaded trucks or dumpers shall not be reversed on gradients.

(h) Sufficient stop blocks shall be provided at every tipping point and these shall be used on every occasion, material is dumped.

(i) Code of Traffic Rules framed by the Manager shall be adopted and followed during movement of all trucks and dumpers. They shall be prominently displayed at relevant places in the opencast workings and on truck/dumpers roads.

(j) When not in use, every truck or dumper or other wheeled trackless machinery shall be moved to and parked at proper parking place(s) which shall be on level ground and away from working area of other mobile equipment. The truck or dumper or other wheeled trackless machinery shall not be parked at a place where it cannot be observed.

(k) No person shall, or shall be permitted to, work on the chassis of a truck or dumper, with the body in a raised position unless the truck or dumper body has been securely blocked in position. The hoist mechanism shall not be depended upon to hold the body of the truck or dumper in a raised position.

(l) Suitable points shall be designated for parking utility vans and other light vehicles in the opencast workings, which in no case shall be less than 30m away from the area where mobile HEMM operates. The light vehicles shall in no case be taken beyond the designated point unless operation of HEMM in the vicinity has been stopped.

(m) No person other than those authorised shall be permitted to enter or remain in any dumping yard, loading and unloading points and turning points.

(n) In respect of every truck/dumper or class of truck/dumper, the maximum load to be hauled shall be determined and notified to operators/drivers by the Manager. Speed limits at which such loads can be hauled shall also be determined and fixed by the Manager, depending on the road gradient, direction of movement, road surface etc., and notices/sign boards specifying the same shall be posted along the haul road at appropriate places/sections.

9.2 Duties of Tipper / Dumper Operators:

9.2.1 Every person authorised to operate tippers and dumpers in a mine shall-

a. inspect the machine assigned to him in the beginning of his shift and test the various systems, sub-systems and protective devices;
b. not take out the machine for work nor shall he operate the machine unless he is satisfied that it is mechanically sound and in efficient working order;
c. maintain a record of every inspection made under clause (a) in a bound paged book kept for the purpose and shall sign every entry made therein;
d. not drive the machine under his charge too fast, shall avoid distractions, and drive defensively, not attempt to overtake another vehicle unless he can see clearly far enough ahead to be sure that he can pass it safely and sound the audible warning signal before overtaking;
e. when approaching a stripping or loading equipment, sound the audible warning signal and not attempt to pass the stripping equipment until he has received proper audible signal in reply;
f. before crossing a road or railway line, reduce his speed, look in both directions along the road or railway line and proceed across the road or railway line only if it is safe to do so;
g. sound the audible warning signal while approaching a blind corner or any other points from where persons may walk in front unexpectedly;
h. before starting or turning the vehicle, ensure that no person or light motor vehicle is present in front or near its vicinity;
i. check that the visual aids like blind spot mirrors, rear vision cameras, etc. are in place and working in order to have proper visibility around the equipment, or else immediately report any defect noticed to the engineer;
j. not operate the tipper or dumper in reverse unless he has a clear view of the area behind and give audible warning signal before reversing a tipper or dumper;
k. be sure of clearance before driving through areas such as tunnel, archway and plant structures;
l. strictly adhere to the transport rules made by the manager of the mine while operating the tipper or dumper;
m. apply parking brake and turn-off battery cut-off switch before leaving the equipment;
n. enter the condition of the machine at the end of his shift in the register or book maintained under clause (c) for necessary information for his successor.

9.2.2 The driver shall ensure that the vehicle is not overloaded and that the material is not loaded in tipper or dumper so as to project horizontally beyond the sides of its body and that any material projecting beyond the front carrier is indicated by a red flag during day and red light after day light hours.
9.2.3 The driver shall not allow any unauthorised person to ride on the vehicle. He shall also not allow more than the authorized number of persons to ride on the vehicle.

9.2.4 As far as possible loaded tipper or dumper shall not be reversed on gradient
9.2.5 "The Code of Traffic Rules" framed by the Mines Manager for movement of all tippers and dumpers prominently displayed at the relevant places in the opencast workings of the mine shall be complied with.

10.0 TESTING OF BRAKES AND STEERING:
A. Brakes of every dumper/truck, tipper and any other wheeled trackless machine shall be tested atleast once in two weeks, in a manner as indicated below:

(a) **SERVICE BRAKE TEST:** The brake shall be tested as specified by the manufacturer of the vehicle or on a specified gradient and speed when the vehicle is fully loaded. The vehicle should stop within a distance as specified by the OEM when the brake is applied, which shall be obtained from the manufacturer of the vehicle.

(b) **PARKING BRAKE TEST:** The parking brake shall be capable to hold the vehicle for a period of at least ten minutes when it is fully loaded and placed at the maximum gradient of roadway on which it is permitted to ply.

B. Unless otherwise recommended by the OEM, the brakes and steering of the dumper, tipper or any such other vehicles shall be tested at the commencement of every shift by the operator or competent person appointed in writing by the manager before operating the vehicle, as per the procedures indicated below:
1.0 Test Procedure- Service Brake:

i. **Fasten the seat belt.**
ii. **Move the machine to dry level surface.**
iii. **Check area around the machine.**
iv. **Make sure that machine is clear from obstacles.**
v. **Start the engine and build air pressure up to cut off point.**
vi. **Apply the service brake while keeping all other brakes off and move the transmission selector lever to first range forward.**
vii. **Accelerate the engine RPM to 1400 and maintain it for a few seconds.**

Desired result: **Machine should not move.**

2.0 Test Procedure- Retard Brake:

i. **Fasten the seat belt.**
ii. **Move the machine to dry level surface.**
iii. **Check area around the machine.**
iv. **Make sure that machine is clear from obstacles.**
v. **Start the engine and build air pressure up to cut off point.**
vi. **Apply the retard brake while keeping all other brakes off and move the transmission selector lever to first range forward.**
vii. **Accelerate the engine RPM to 1300 and maintain it for a few seconds.**

Desired result: **Machine should not move.**

3.0 Test Procedure- Dump and Parking Brake:

i. **Fasten the seat belt.**
ii. **Move the machine to dry level surface.**
iii. **Check area around the machine.**
iv. **Make sure that machine is clear from obstacles.**
v. **Start the engine and build air pressure up to cut off point.**
vi. **Apply the service brake while keeping all other brakes off and move the transmission selector lever to first range forward.**
vii. **Accelerate the engine RPM to 1200 and maintain it for a few seconds.**

Desired result: **Machine should not move. Parking brake is considered to be in good working condition and can be expected to hold a loaded dumper on gradient of 15%.**

4.0 Test Procedure- Steering:

i. **Fasten the seat belt.**
ii. **Move the machine to dry level surface.**
iii. **Check area around the machine and ensure that machine is clear from obstacles.**
iv. **Start the engine and build air pressure up to cut off point.**
v. **Remove all the brakes and keep gear in neutral.**
vi. **Rotate the steering wheel and bring the tyres to an extreme end position.**
vii. **Remove the hands from steering wheel.**
viii. **Accelerate the engine RPM to 1000.**
ix. **Rotate the steering wheel and bring the tyres to other extreme end position. Repeat (vii) & (viii).**

Desired result: **When the hand is removed from the steering wheel, either the steering or the tyres shall not move on its own. If any movement is observed, it shall be concluded that the steering system needs checking and necessary repairs shall be carried out before putting in the dumper into service.**

C. A record of every such test carried on every dumper/truck/tipper/other mobile HEMM shall be kept maintained in a bound paged book which shall be signed by the person carrying out the tests and shall be countersigned by the engineer and the manager. In case any defect in braking system is observed in any equipment/HEMM, such equipment/HEMM shall be taken off from operation and record thereof shall be kept maintained.

11.0 EXAMINATION, REPAIR AND MAINTENANCE OF HEMM AND OTHER MACHINES:

11.1 A scheme for proper maintenance, repair, overhaul and erection in respect of heavy earth moving machinery (commensurate with the capacity/size type of machines used in the mine), covering places such as repair sheds and workshops, shall be drawn and implemented. This shall also include framing and implementation of Code of Practice for erection, inspection, examination, repair, maintenance, etc. of such equipment before putting the same into use in the mine.

11.2 Every drilling and earth moving machinery or equipment or accessory (herein after called machine) shall be thoroughly examined at least once in every shift and maintained in good and safe working condition. In case

of wheeled trackless HEMM like dumpers, trucks, tippers and other such machinery, special attention shall be paid to safe working order of brakes, steering system, horn, audio-visual reversing alarm, side indicator lamps, rear view mirrors and head lights & tail lights.

11.3 If the engineer, mechanical foreman or other competent person making an inspection notices any defect in any machinery, the said machinery shall not be used until the defect has been remedied.

11.4 Any defect in any machinery, reported by its operator, shall be promptly attended to.

11.5 Any machinery found to be in an unsafe operating condition shall be tagged at the operator's position; *"Out of Service, Do Not Use"* and its use shall be prohibited until the unsafe condition has been corrected.

11.6 All repairs shall be done at a location (Workshop) which provides a safe place for the persons engaged on repairs. Adequate attention shall be paid towards proper layout of workshops and repair sheds so as to ensure due protection from the movement of HEMM therein to work persons deployed at these places.

11.7 Except for testing, trial or adjustment, which must necessarily be done while the machine is in motion, every machine shall be shut down, and positive means taken to prevent its operation, before any repair, maintenance or lubrication is undertaken on it.

11.8 Power shall be disconnected when repairs are to be carried on any electrically powered machine/apparatus.

11.9 Any machinery, equipment or part thereof which is suspended or held apart by use of slings, hoists, or jacks shall be substantially blocked or cribbed, before men are permitted to work underneath or between the same.

11.10 While inflating tyres, suitable protective cages shall be used. Tyres shall in no case be inflated by sitting either in the front of it or on top of the same.

11.11 Operation and maintenance of heavy machineries such as shovels, excavators, pay-loaders, dumpers, tippers, trucks etc. shall be done strictly in accordance with the OEM's operation and maintenance instructions which shall be obtained from the manufacturers.

11.12 The stability of HEMM shall be carried out at least once in every year and after every major overhaul by an independent agency.

11.13 The crane and overhead crane shall be subjected to proof load test and NDT test once in a year from a competent authority.

11.14 The pressure vessel receiver shall be subjected to hydraulic and NDT test and shall be carried by a competent authority.

11.15 In case of any defect in equipment such as brake, steering and safety device, the equipment shall immediately be taken out from use keeping a record thereof.

11.16 The Operator or Driver shall not leave the machine while it is running state unless it is placed under the charge of a competent person.

11.17 Additional Duties of Engineer In-Charge of Machines and Vehicles in Opencast Workings:

11.17.1 During each shift, the machines and equipment deployed in the mine shall be placed under the charge of such number of qualified and experienced engineers, assisted by adequate numbers of mechanical foremen and mechanics, as is adequate to effect adequate inspection, examination, safe operation and maintenance of the machines, equipment and accessories.

11.17.2 During his shift the engineer(s) shall -

(i) inspect, test & examine every machines, equipment and accessories, and satisfy himself that they are in sound and safe working order.
(ii) if the vehicle or machine is required to work after day-light hours, ensure that the lights in working order.
(iii) not allow any machine, equipment to be used, if it is found defective.
(iv) ensure that every machine, equipment, accessory is used in a safe and efficient manner.
(v) ensure that each operation/activity concerning repair, maintenance and operation of machinery/equipment is carried on in a safe and efficient manner.

11.18 A record of every examination, repair and maintenance carried out in accordance with the above shall be maintained in a bound-paged book for the purpose. Every entry made in the book shall be signed and dated by person making the inspection and countersigned by the Engineer-in-charge.

IV. DEEP HOLE DRILLING AND BLASTING:

12.0 DRILL MACHINES:

12.1 Truck mounted drill machines designed for tube-well drilling for sources of water shall not be used and only proper type of (crawler mounted) blast hole drill machines, designed for mining purposes, shall be used in the mine.

12.2 All control switches for all drilling operations including tramming and set up shall be centralized in a properly designed operator's cabin located at the drilling end. Drill shall be provided with hydraulically operated carousel/ rod changer. Suitable hydraulic jacks with controls from operator's cabin shall be provided for levelling of the machine.

12.3 The drill shall have an inbuilt system of directing a jet of water on the cutting edge to wet the cuttings or other equally efficient device kept in operation to prevent the atmosphere being charged with dust.

13.0 DUTIES OF DRILL OPERATORS:

13.1 At the beginning of his shift, the drill operator shall examine the drilling equipment and satisfy himself that-

(i) crown blocks are mounted securely;
(ii) where compressed air drills are used, all hose connections are in order;
(iii) the drilling equipment is in safe working condition, and,
(iv) wet drilling system is in order.

13.2 The drill operator shall ensure that -

(i) work persons keep clear of auger and drill stem while the drill is in motion;
(ii) work persons do not work under suspended tools, when tools are removed from the holes,
(iii) all finished drill holes are properly plugged so as avoid possible injury to any one accidentally stepping onto the hole.

14.0 DRILLING AND BLASTING OF DEEP HOLES:

14.1 General:

14.1.1 The owner and agent of the opencast mine shall ensure that deep hole drilling and blasting pattern for the mine is scientifically designed taking into consideration all mining parameters which could have adverse impact

on ground vibration in and around the mine and long-term stability of slope of opencast workings and dump yards.

14.1.2 The Owner, Agent and Manager of the mine where deep hole blasting is proposed shall indemnify the occupants/owners of houses / dwellings / buildings or other structures and the public authority concerned, if any, against danger to their property or injury to them or other persons, arising out of the operations conducted in respect of deep hole blasting.

14.1.3 The Owner, Agent and Manager of the mine where deep hole blasting is proposed shall ensure that:-

a. Only properly trained persons who are authorized in writing by the manager for the purpose are deployed.
b. Adequate personal protective equipment that are required to be used by persons deployed in this connection are provided and also used.
c. Adequate scientific equipment for measurement of various blasting parameters like ground vibrations, air-overpressure, etc., are provided.

14.1.4 The entire operations of conduct of deep-hole drilling and blasting operations in the mine including transport of the explosive to the site of its use, shall be placed under the overall charge of a competent person holding First or Second class manager's certificate, hereinafter referred to as "Blasting Officer", duly appointed in writing by the manager for the purpose. He shall be assisted in operations connected therewith by adequate number of persons holding at least an Foreman certificate of competency, who are duly authorized in writing by the Manager and are fully trained in deep hole drilling and blasting techniques.

14.1.5 No deep hole blasting shall be conducted in the mine using Ammonium Nitrate Fuel Oil (ANFO), Site Mixed Slurry (SMS) or Site Mixed Emulsion (SME) explosives without obtaining a separate permission as required under Regulation 155(1) and 162(5) of Metalliferous Mines Regulations, 1961.

14.1.6 No deep hole blasting shall be conducted in the mine within the danger zone of 300m from any permanent building or structure not belonging to the owner without obtaining a separate permission under Regulations 164(1A)(c)&(1B)(a) of the Metalliferous Mines Regulations, 1961.

14.2 Drilling of Deep Holes:

14.2.1 Before commencement of drilling, the area where drilling is proposed shall be thoroughly cleaned of loose rocks and debris and position of every deep hole to be drilled shall be distinctly marked by the blasting office or blasting foreman, so as to be readily seen by the drillers.

14.2.2 No drilling shall be commenced in an area where shots have been fired, until the blaster/ blasting foreman has made a thorough examination of all places, including remaining butts of old deep holes, for unexploded charges that the drill rod may strike.

14.2.3 No drill or bore rod or pick shall be inserted in butts of old deep holes even if an examination under clause 14.2.2 has failed to reveal presence of explosives.

14.2.4 Drilling operations shall not be carried on simultaneously on two benches, at places directly one above the other.

14.2.5 Drilling and charging of deep holes shall not be carried out in the same area at the same time.

14.3 Charging and Stemming of Deep Holes:

14.3.1 No deep hole shall be charged in crushed, broken or fractured ground strata.

14.3.2 All detonators and primed cartridges shall be kept in secure receptacles at a safe distance from the detonating fuse and the explosive, until actually required for use.

14.3.3 Charging of explosives shall be such as to ensure continuity of the explosive column. Where deck charging is done, continuity shall be ensured for each deck of explosive charge.

14.3.4 Primer explosive cartridge shall not be slit or deformed.

14.3.5 Adequate amount of cap sensitive explosive shall be used with non-cap sensitive explosive charge to ensure complete detonation of the explosive charge.

14.3.6 In case, water is encountered in any shot-hole, either the shot hole shall be dewatered by blowing compressed air into the hole or the explosive column shall be gently pushed down by wooden rod and sufficient time given for the explosive column to sink to the desired depth before the round is fired. Decking in watery holes shall be avoided.

14.3.7 The charging of holes shall be carried out in day light hours only.

14.3.8 During the approach and progress of an electric storm, no charging and blasting shall be done and precaution laid down in DG Technical Circular 1/1995 shall be followed.

14.3.9 Only such minimum number of persons shall be allowed to remain at the charging site as are required during charging operations and firing of deep holes.

14.3.10 The entire area where charging of explosives is to be done shall be demarcated by suitable flags and effectively guarded to prevent unauthorised entry of persons or plying of other vehicles, and shall be kept free from dry vegetation and other combustible material.

14.3.11 Smoking, naked light, open flames or mobile phone shall not be allowed within 300m of the area where charging of explosives is being carried on.

14.3.12 The holes shall be charged (and fired) as soon as possible after the explosive is transported to the site of blasting.

14.3.13 Explosives shall be delivered/charged first into the hole farthest from the 'Priming Station'.

14.3.14 Not more than one hole shall be in process of being charged on any face at any point of time.

14.3.15 All operations connected with charging, stemming and making connections shall be done while standing on the solid ground.

14.3.16 The cartridges of explosives shall be lowered carefully into the shot holes, so as to avoid sticking of cartridges in the shot holes, thereby causing air space(s) in the explosive column. After charging such hole with explosives, the length of the uncharged/remaining portion of the hole shall be measured to confirm that the cartridges are in close contact with each other and there is no air gap between the explosive column. In case, the length of uncharged portion of the hole is not as per calculation, thereby indicating the presence of air space, attempt may be made to push down the charge in case of slurry explosives only. The remaining hole shall then be stemmed with moist sand before blasting the shot holes.

14.4 Precautions during Blasting/Firing:

14.4.1 Shots shall not be fired except during the hours of day light.

14.4.2 Shots shall not be fired in crushed, broken or fractured ground.

14.4.3 The manager shall fix the blasting time and shall circulate it to all concerned and display it prominently on the notice Board and at conspicuous places in and around the mine. As far as practicable, such blasting time shall be fixed either between the shifts, or during the rest interval, or at the end of work for the day.

14.4.4 The danger zone shall be distinctly demarcated (by means of red flags or other suitable means) at least 30 minutes before firing of holes.

14.4.5 During approach of an electric storm, following precautions shall be taken –

(i) No explosives, particularly detonators shall be handled.
(ii) If charging operations have begun, work shall be discontinued till the storm has passed.
(iii) If shots are being fired electrically, all exposed wires shall be coiled up and kept covered by something other than a metal plate.
(iv) All wires shall be removed from contact with metallic plates/steel rails so as to prevent the charge from exploding prematurely by a local strike of the lightning.
(v) If the firing circuit has been set up before the thunderstorm came on, the persons at the site should withdraw at the earliest and the blast should be fired off immediately;

14.4.6 All holes charged on any one day shall be fired on the same day so that the charged holes are not allowed to sleep over night.

14.4.7 The area of explosives charged shot holes shall be conspicuously marked by visible bright red flags.

14.4.8 Blasting shall be done preferably against a free face. Blasted material shall be cleared off before commencement of drilling operations for succeeding round.

14.4.9 All normal precautions for charging and firing, as laid down under Regulation 162 of Metalliferous Mines Regulations, 1961, shall be strictly observed.

14.4.10 Guards shall be posted to ensure that no person inadvertently enters the danger zone and to ensure that all persons within the danger zone, have taken proper shelter.

14.4.11 Before shots are charged, stemmed and fired, sufficient warning by siren or other suitable means shall be given to warn persons in the danger zone, including to the habitants of structures and dwellings, not belonging to Owner.

14.4.12 In case of misfires, precautions as laid down in Regulation 167 of Metalliferous Mines Regulations, 1961, shall be taken.

14.5 Miscellaneous:

14.5.1 Mobile phones shall not be used by any person connected with deep hole blasting operations or handling of explosives. Only a two-way communication by wireless devices other than mobile phones shall be provided to the blasting officer, all sentries and the assistant of the blaster.
14.5.2 A proper record of blast parameters like spacing & burden of holes, hole depth, number of holes fired in the round, charge/hole, charge/delay, charge/round, length of explosive column(s) & stemming column length(s), initiation pattern (with proper sketches wherever called for), results of ground vibration observed (ppv, frequency & air over pressure) and distance upto which flying fragments resulting out of blasting projected, shall also be kept maintained in a bound paged book for each round of deep-hole shots fired. The records shall be duly signed by the Blasting Officer and countersigned by the Manager of the mine.

14.5.3 The Manager of the mine, after thorough consultations with the OEM and explosives manufacturers, shall formulate suitable Codes of Practice in respect of drilling, charging, stemming, warning of persons, taking shelter, and firing of shots.

V. MISCELLANEOUS

15.0 GENERAL ILLUMINATION:

15.1 Adequate general lighting arrangements conforming to stipulations not less than as specified in Govt. Notification No.GSR-618(E) dated 28th April 2017, published in the Gazette of India Part II, section 3(i) on 21st June 2017, (reproduced in DGMS (Legis.) Circular No.3 of 2017 dated 06.11.2017), issued under Regulation 148(2) of the Metalliferous Mines Regulations, 1961, shall be provided at all opencast workings, haul roads, dump yards, sumps and other working places for working the mine beyond day-light hours.

15.2 Illumination surveys at an interval not exceeding 30 days shall be conducted at all work-places to ascertain that stipulations of Govt. Notification No. GSR-618(E) dated 28th April 2017 are being met with.

15.3 Suitable search lights shall be provided to the concerned mine officials for better supervision at night.

16.0 PRECAUTIONS AGAINST FIRE:

16.1 A code of practice shall be drawn up for dealing with fires at different locations in the opencast mine, and for dealing of fires in heavy earth moving machinery.

16.2 Every heavy earth moving machinery used in opencast workings shall be provided with automatically operated fire detection and suppression device or system. However, in case of trucks and dumpers of less than 35 tonne capacity used in opencast mines, it may be sufficient if semi-automatic type fire suppression system is provided.

16.3 Every fire protection system mentioned at clause 16.2 shall be tested at such interval and as per such procedure as recommended or prescribed by the manufacturer.

16.4 Daily inspection/maintenance and periodical washing of the HEMM and other equipment shall be carried out to avoid leakages or accumulation of hydraulic oils/fuels and, thereby to control the accidents due to fire.

16.5 A competent person shall, once at least in every month, examine all the equipment, material and arrangements provided for fire-fighting and shall discharge and re-fill the fire-extinguishers as often as may be necessary to ensure that these are in proper working order and any deficiency found during any such examination or otherwise shall be immediately remedied.

17.0 PROTECTION OF WORKERS AGAINST NOISE, VIBRATION & LIGHTNING:

17.1 Suitable steps shall be taken by all appropriate means to reduce the exposure of workers to any excessive noise and vibration. Guidelines given in DGMS (Tech.) Circular No.18 of 1975 may be followed.
17.2 Owner, Agent and Manager of the mine shall ensure adequate lightning protection system to safeguard the persons and machinery deployed in the mines from hazards associated with lightning strike as per DGMS Circular No. 10/2020.

18. SAFE USE OF MOBILE CRANES: CODE OF PRACTICE

18.1 All machinery used to lift or transport equipment and materials, shall be designed, constructed and erected, inspected, maintained and operated as specified by the manufacturer.

18.2 The rated capacity or legible load chart, where appropriate, of a crane shall be permanently marked on the structure at a clearly visible place and, in any case, such machinery shall not be operated at a capacity in excess of the rated limit.

18.3 No persons shall load any crane in excess of the safe working load except for the purpose of test, which shall be carried out by an authorized person and only in a manner specified by manufacturer.

18.4 The rated capacity of a hoist shall not exceed the capacity of the structure supporting the hoist.

18.5 The engineer or other component persons shall regularly inspect and maintain all cranes to ensure that every component thereof is capable of carrying out its original designated function, who shall also maintain a record thereof, duly signed and dated by him.

18.6 A crane shall not be used until any condition that may endanger safety of any person is remedied.

18.7 All installations, modifications and repairs to load-bearing equipment shall be certified by a competent person or authorised organisation in accordance with the original design and safety standard.

18.8 All cranes with a boom that is movable in vertical plan shall-

(a) have a device that can be clearly read by the operator, to indicate the boom angle if the rated capacity is affected; and

(b) be fitted with an automatic load indicator showing the safe working load.

18.9 All modifications that effect the rated capacity of a crane or hoist shall be assessed, and the rated capacity shall be adjusted by the original equipment manufacturer or a competent person or authorised organisation.

18.10 There shall be a safe means of access and egress to the operator's position and to maintenance locations for all cranes and hoists.

18.11 If normal means of egress is not always available to the operator, then an alternative safe means shall be provided to get from the operating position to a safe area in the event of a power failure or other emergency.

18.12 Effective audible and visible communications devices shall be installed on crane or hoist.

18.13 The crane or hoist operator shall sound a warning signal when it is necessary to alert workers.

18.14 All controls on a crane or hoist shall be clearly identified and shall return to neutral when release, and an automatic braking system shall be activated.

18.15 The operator of crane or hoist shall be protected against hazardous conditions such as airborne contaminants, falling or flying objects and excessive heat or cold.

18.16 The operator's seat on a crane or hoist shall be of an ergonomic design that allows operator to operate the equipment safely.

18.17 All the hooks, hook guards or latches, wire ropes, chains and other attachments and fittings shall be maintained and inspected on a regular basis.

18.18 The operator of a crane or hoist shall perform a check at the start of each shift and test the limit switch and a report thereof shall be maintained.

18.19 Transport routes for cranes shall be clear of obstructions and transport routes for wheeled or tracked cranes shall, as far as practicable be level.

18.20 Stability of the crane shall be ensured by avoiding any addition of extra load when the crane at the point of tipping.

18.21 To avoid toppling of crane, the operator shall be select correct configuration prior to the operation of the crane like telescoping of boom, slewing of super structures, derricking of boom, lifting of load etc.

18.22 Training shall be given to crane operators to ensure proper and safe operation of the crane.

18.23 All Cranes shall be provided with Fail-safe braking and emergency steering.

19.0 CONTRACTOR WORK VIS-À-VIS SAFETY:

19.1 In mines where any work is carried out through contractors, the owner, agent and manager of the mine shall ensure that the guidelines on 'employer's responsibilities', 'contractor's responsibilities' and contract employee's responsibilities' as recommended by the 10th National Conference on Safety in Mines (and reproduced by DGMS Tech. (SOMA) Circular No. 1, dated 04.01.2008) are strictly complied with.

19.2 Additional Precautions While Deploying Contractual Workers and Machineries Not Belonging to the Owner:

19.2.1 Buyers' trucks shall not be allowed to enter into the mine workings, be parked away from the mine premises and only such number of trucks shall be allowed to enter the dispatch yard which can be accommodated thereat and are due for loading during the shift, with due consideration of safety of persons engaged in loading operations.

19.2.2 Trucks, tippers and other heavy vehicles, not belonging to management (including trucks/ tippers engaged for transport of mineral from opencast workings to Crusher/Siding, and for transport of mineral from Crusher to Siding), shall not be allowed in the mine premises without a valid pass issued by the manager or other competent person. Before the pass is issued, the engineer shall ensure the road-worthiness of such vehicles.

19.2.3 In order to check entry of unauthorised trucks, tippers and other vehicles in mine premises, properly manned check gate(s) at the mine entrance(s) shall be set up, where record of entry and exit of each vehicle shall be maintained.

19.2.4 At the check gate(s), driving license of the drivers shall also be checked for eliminating the possibility of unlicensed persons driving the vehicles. Entry of unauthorised persons shall also be checked & controlled at such check gate(s) which shall be manned suitably for the purpose.

19.2.5 Persons engaged through contractors in any work within the mine premises shall be imparted relevant training and other job-related briefings, and the drivers/operators of HEMM/trucks/tippers/vehicles belonging to contractors shall additionally been explained the salient provisions of "traffic rules".

19.3 The Explosive vehicles and fuel bowsers deployed in the mines shall have valid PESO license.

19.4 A surveyed-off or old equipment which has crossed its rated life shall not be used in the mine unless its fitness has been certified by a Committee consisting of senior technical officers of the company, OEM and an independent agency after making a thorough check and inspection of the condition of equipment and, if necessary, after such maintenance/repairs of the equipment as advised by the Committee.

20.0 CODE OF SAFE WORK PRACTICES:

20.1 A suitable 'Code of Traffic Rules & Safe Work Procedures' for regulating the movement of Heavy Earth Moving Machinery, trucks, tippers and other wheeled trackless machinery (commensurate with the capacity/size type of machines used in the mine) shall be framed by the manager and enforced in the mine. Such Code of Traffic Rules should be deliberated in the Safety Committee. A copy of traffic rules, in a language understood by them, shall be made over to all concerned, i.e., to drivers and operators of HEMM/trucks/tippers (including those belonging to contractors), supervisors and mine officials, and to such other persons who monitor/control movement of HEMM.

20.2 A suitable 'Code of Practice' for prevention of injuries to persons engaged in tipping on stock piles, tipping at crusher, dumping of overburden at dump yards, at loading and unloading points etc. (commensurate with the capacity/size type of machines used in the mine) shall be framed by the manager and enforced in the mine. Such Code of Practice should be deliberated in the Safety Committee. A copy of the code of practice, in a language understood by them, shall be made over to all concerned, i.e., to dump-men, drivers and operators of HEMM/trucks/tippers (including those belonging to contractors), supervisors and mine officials, and to such other persons who monitor/control dumping/tipping operations.

21.0 Additional Conditions:

This permission is also subject to the following additional conditions:

21.1 In the event of any change in the circumstances connected with this permission which is likely to endanger the life of persons employed in the mine, the mining operations for which this permission has been

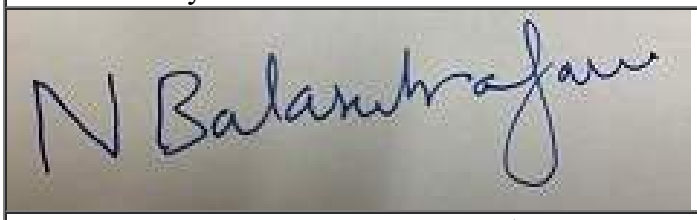
granted shall be stopped forthwith and intimation thereof shall be sent to this Directorate. The said mining operation shall not be resumed without express and fresh permission in writing from this Directorate.

21.2 This permission may be amended or withdrawn at any time if considered necessary in the interest of safety.

21.3 If at any time any of the conditions, subject to which this permission has been granted, is violated or not complied with, this permission shall be deemed to have been revoked with immediate effect.

21.4 This permission is being issued specifically under the regulations mentioned above and without prejudice to any other provisions of law, which may be or may become applicable at any time.

21.5 Unless renewed, this permission shall remain **valid for a period of 5 (five) years** from the date of issue of this letter or till validity of the mining lease, whichever is earlier.

Your Faithfully

NASINA BALASUBRAHMANYAM (DIRECTOR - BHUBANESHWAR REGION 2)
THIS IS A SYSTEM GENERATED DOCUMENT, DOES NOT REQUIRE ANY SIGNATURE.

The Member Secretary
State Pollution Control Board, Odisha
Paribesh Bhawan,
A/118, Nilakantha Nagar, Unit - Vlll
Bhubaneswar - 751012

MD/ ENV/321/120/ 2025
Date: 08th September 2025

Sub: Environmental Statement of Kalamang West (Northern Part) Iron Ore Mines, M/s Tata Steel Limited for 2024-25.

Dear Sir,

Kindly find attach herewith the Environmental Statement in the prescribed format (Form V) as per "Environmental (Protection) Amendment Rules 1992" of our Kalamang West (Northern Part) Iron Ore Mines for your kind perusal.

Thanking you,

Yours faithfully

(Abinash Das)
Area Manager (Environment), OMQ

Encl: As above

Copy to: The Regional Officer, State Pollution Control Board, Near Hockey Chowk, Panposh, Rourkela, Odisha 769004

ENVIRONMENT STATEMENT
2024-25



Kalamang West (Northern Part) Iron ore Mines

KALAMANG WEST (NORTHERN PART) IRON ORE MINE

TATA STEEL LIMITED

September 2025

FORM - V
(See Rule -14)

ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st MARCH, 2025

KALAMANG WEST (NORTHERN PART) IRON ORE MINE, TATA STEEL LIMITED

PART–A

1	Name and address of the owner/ occupier of the industry, operation or process	:	Owner: Mr. T V Narendran, Managing Director & CEO, Tata Steel Limited, PO: Jamshedpur, Dist.: East Singhbhum, Jharkhand-831001 Agent: Mr. Dipak Behera, Chief (Kalamang & Gandhalpada Project) Kalamang West (Northern Part) Iron Ore Mine Tata Steel ltd, Joda Dist.- Keonjhar, Odisha – 758034 Manager: Mr Ajay Thakur, Mine Manager, Kalamang West (Northern Part) Iron Ore Mine Tata Steel Limited, Joda Dist.- Keonjhar, Odisha – 758034
	Nominated Owner	:	Mr. Atul Bhatnagar, General Manager, OMQ division, Administrative Building, Noamundi Iron Mine, Tata Steel Limited PO.: Noamundi, Dist.-West Singhbhum Jharkhand – 833217
2	Industry Category	:	Opencast Iron Ore Mining, Crushing & Screening (Major)
3	Production Capacity*	:	Mining: 2.95 MTPA Iron Ore (ROM)
4	Year of Establishment	:	Mine operation has not started till date.
5	Date of last Environmental Statement submitted.	:	26th September'2024

*As per Environmental Clearance

PART–B
Water and Raw Material Consumption

(i) Water Consumption:

Consumption Head:	**2023-24 (in Cu.m/day) (Annual Average)**	**2024-25 (in Cu.m/day) (Annual Average)**
Process	0	0
Spraying in mine pit, services	0	0
Domestic	0	0
Name of the product	**Process water consumption per product (m3/MT)**	**Process water consumption per product (m3/MT)**
Iron Ore	0	0

Mine operation has not started*.**

This is a proposed mechanised iron ore mine. The iron ore processing is dry crushing and screening only. Dust suppression at C&S plant will be carried out through a scientific way using dry fog system, thus reducing the requirement of water to very minimum level.

ii) Raw Material Consumption

The following items have been consumed/ utilized:

Name of Raw Materials	Consumption of Raw Material	Consumption of Raw Material
	During current financial year (2023-24)	During current financial year (2024-25)
High Speed Diesel	0	0
Lubricants	0	0
Grease	0	0
Explosive of all types (Explosive, codex, detonator)	0	0
Gas	0	0
Tyres	0	0
Drill rods	0	0
Electricity Consumed	0	0
Electricity Generated	NA	NA

Mine operation has not started*.**

PART–C
POLLUTION DISCHARGED TO ENVIROMENT/ UNIT OF OUTPUT
(Parameters as specified in the consent issued)

Pollutants	Quantity of Pollutants discharged (mass / day)	Concentration of Pollutants discharges (mass / day)	Percentage of variation from prescribed standards with reasons
a) Water	Mining operation is yet to commence. Thus, no ETP and STP is installed at site at present. However, provision of installation of the same is planned & under progress. Treated water from STP and ETP will be reused for water sprinkling purpose as well as horticulture purpose. Zero effluent discharge shall be maintained. **Water quality report for surface water in buffer zone is attached as Annexure-1**		
b) Air	The Kalamang West (Northern Part) Iron Mine is a proposed opencast iron mine with crushing & screening plant. The air quality in the form of fugitive, dust fall, ambient, respirable has been measured and monitored regularly and is well within limits. Air monitoring is being conducted in buffer zone. 3 continuous ambient air quality monitoring stations with PM_{10}, $PM_{2.5}$, SOx, NOx, (NO2 & NO) & CO parameters have been planned to be installed. **The results of air quality monitoring are attached as Annexure-2.**		

PART–D
HAZARDOUS WASTES

As specified under the Hazardous & Other Waste (Management & Trans boundary Movement) Rules, 2016 and amendment thereof

Hazardous Wastes	Total Quantity During previous financial year (2023-24)	Total Quantity During previous financial year (2024-25)
(a)From Process • Used Oil • Waste containing Oil • Lead Bering residues (Batteries etc) • Rejected & used hose pipes	NA	NA
ii) From Pollution Control Facility • Waste oil from oil & grease separation pit • Sludge from oil and grease separation pit	All the Hazardous waste generated will be disposed as per law. Nil (Included in process)	All the Hazardous waste generated will be disposed as per law. Nil (Included in process)

Mine operation has not started*.**

PART–E
SOLID WASTES

Solid wastes from Kalamang West (Northern Part) Iron ore mines are Overburden/rejects removed during mining operations. All the materials overburden will be stacked at designated place inside the mine as per the approved Mine Plan. However, other solid waste (scrap material, used conveyor belts, tyres etc.) from mining activity will be stored at designated place.

Sources	Total Quantity During previous financial year (2023-24)	Total Quantity During previous financial year (2024-25)
a) From Process • From mining as Overburden	NIL	NIL
• Rejects	NIL	NIL
b) From Pollution Control Facility		
c) i. Quantity recycled or reutilized within the unit	NIL	NIL
ii. Quantity sold • General Office waste		
iii. Quantity disposed • Mining overburden		

Mine operation has not started*.**

PART-F

PLEASE SPECIFY THE CHARACTERISTICS (IN TERMS OF COMPOSITION AND QUANTUM) **OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES**

The Kalamang West (Northern Part) Iron Ore Mine has not started operation till date. The used oil will be generated from HEMM maintenance, which are used in mining operations. The used oil will be disposed to authorized agency for recycling and reuse. The hazardous waste such as used batteries is sold to authorized agency.

The other solid waste in the form of overburden and sub-grade mineral are stocked in designated place.

PART-G

IMPACT OF POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

- For conservation of natural resources, high efficiency HEMM will be used with adequate maintenance so as to reduce the fuel consumption. Zero effluent discharge will be maintained.
- For ground water augmentation, various rainwater harvesting structures will be developed in future in the buffer zone which will harvest the groundwater.
- Scientific mining along with mixing of ore of different grades for conservation & common boundary mining will be practiced for conservation of mineral.

PART-H

ADDITIONAL MEASURES/ INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION, PREVENTION OF POLLUTION

Mine operation has not started till date. Below mentioned are some measures proposed for abatement of pollution.

- Settling ponds will be conducted for storage of surface runoff.
- Construction of toe walls, garland drains along with check dams will be done for arresting silts from overburden dumps.
- Awareness programme such as World Environment Day, Biodiversity Day, Swachhata pakhwada, Earth Day was organised for creating awareness of people.
- In addition, Tata Steel Foundation (TSF) is engaged in peripheral developmental activities in villages around the mine. The projects of the Society include irrigation and agricultural extension projects, plantation programmes, creation of SAVE FOREST groups, civic amenities development, medical care and health education, rural sports and skill development, rural cultural promotion etc.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF THE ENVIRONMENT

- The Company is having a full-fledged Environmental Management Department with personnel from different backgrounds to take care of all environmental aspects relating to mines of Tata Steel. This department has in house capabilities for monitoring various environmental parameters and suggesting to the management necessary abatement measures.

- Various awareness programs throughout the year conducted in the area which included celebration of World Environment Day, World Water Day, Mine Environment & Mineral Conservation Week, Word Bio-diversity Week, Annual Flower & Vegetable Show etc. In which environment conservation models, current & future proposals are made, environment messages through Nukkad natak, poems, slogans, swachhata drive has been condcuted every year.

Rishi Raj Kashyap

Manager (Environment),
Kalamang West (Northern Part) Iron Ore Mine
Tata Steel Limited

Annexure - 1

WATER QUALITY DATA 2024-25
Kalamang West (Northern Part) Iron Ore Mine
(Annual Average)

SURFACE WATER					
Parameters	**Sona river Upstream**	**Sona river Downstream**	**Karo river Upstream**	**Karo river Downstream**	**Standard**
pH	6.73	6.89	6.64	6.83	**6.0–9.0**
DO (mg/l)	5.9	5.77	5.88	5.75	**>4.0**
TSS (mg/l)	25.87	19.87	27.12	19.75	-
BOD 5 days (mg/l)	2.35	2.32	2.40	2.33	**30**
COD (mg/l)	6.60	5.87	7.67	6.52	-
Iron (mg/l)	0.43	0.39	0.42	0.37	**0.5**

Note: BDL – Below detection limit.

Annexure - 2

AIR QUALITY DATA 2024-25
Average Air quality of Kalamang Iron ore Mine of FY'25

Pollutants	Concentration of pollutants ($\mu g/m^3$)	Standards ($\mu g/m^3$)
AAQ-1 (Gauli Village)		
1. PM_{10}	57.29	100
2. $PM_{2.5}$	21.55	60
3. SO_2	11.15	80
4. NO_x	21.88	80
5. CO	BDL	4*
AAQ-2 (Kalamang Village)		
1. PM_{10}	59.09	100
2. $PM_{2.5}$	23.24	60
3. SO_2	11.58	80
4. NO_x	21.92	80
5. CO	BDL	4*
AAQ-3 (Katesahi Village)		
1. PM_{10}	55.12	100
2. $PM_{2.5}$	21.03	60
3. SO_2	10.95	80
4. NO_x	20.28	80
5. CO	BDL	4*
AAQ-4(Gandhalpada Village)		
1. PM_{10}	59.85	100
2. $PM_{2.5}$	21.7	60
3. SO_2	11.47	80
4. NO_x	21.32	80
5. CO	BDL	4*
AAQ-5 (Malda Village)		
1. PM_{10}	59.07	100
2. $PM_{2.5}$	21.60	60
3. SO_2	10.87	80
4. NO_x	20.60	80
5. CO	BDL	4*

*BDL – Below detective limit